

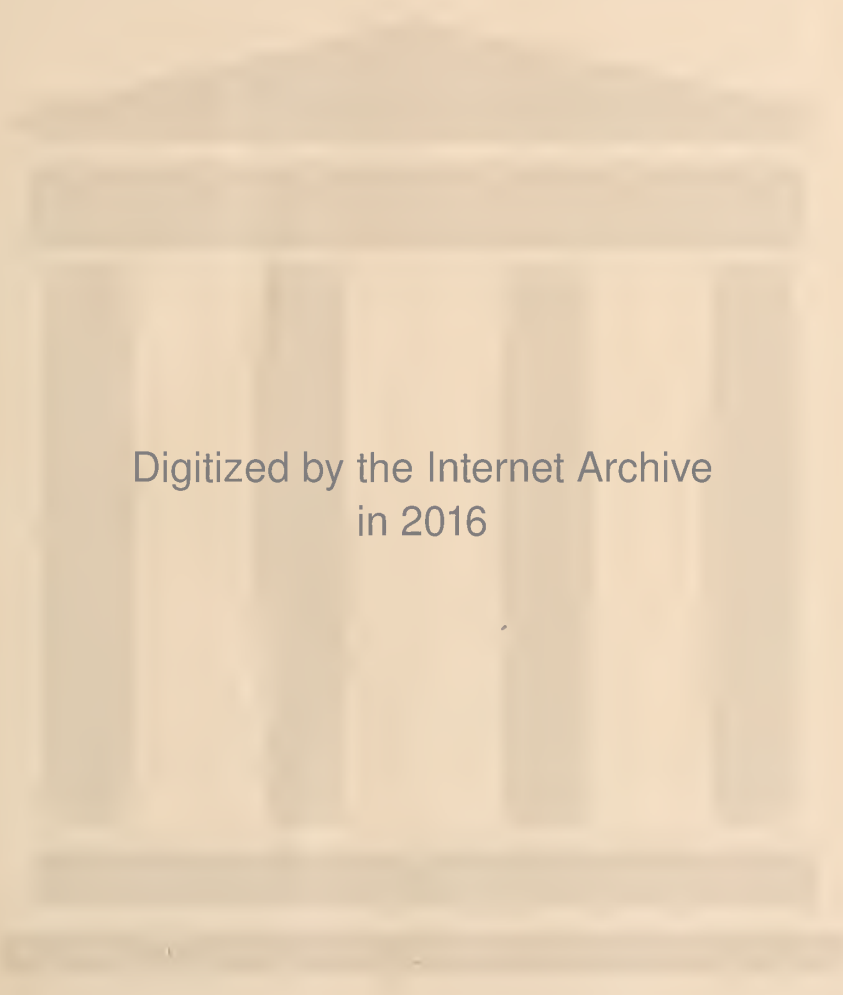
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COLORADO MEDICINE

A Medical Journal

*CONTAINING THE PROCEEDINGS OF THE COLORADO STATE MEDICAL SOCIETY
AND ITS CONSTITUENT SOCIETIES, WITH PAPERS READ BEFORE
THEM AND OTHER RELATED MATTER*

PUBLISHED UNDER THE SUPERVISION OF THE COMMITTEE ON PUBLICATION
OF THE COLORADO STATE MEDICAL SOCIETY

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Colorado Medicine

The Official Organ of the Colorado State Medical Society

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COLORADO MEDICINE

PUBLISHED BY THE COLORADO STATE MEDICAL SOCIETY.

VOL. II.

DENVER, JANUARY, 1905.

No. 1

LEADING ARTICLES

WHAT CONSTITUTES THE PRACTICE OF MEDICINE IN COLORADO?

For all who believe that the medical profession ought to have a definite status before the community, the brief of Attorney-General Miller, Assistant Attorney-General Melville, and H. E. Kelly, Esq., presenting the "Bass Case" before the Court of Appeals of the State of Colorado, contains some very interesting reading.

John T. Bass, graduated from the Bolles' Institute of Osteopathy, placed in his office window this sign: "Dr. J. T. Bass, Limited to Osteopathy". The State Board of Medical Examiners consulted reputable legal council, who advised them that this, without the proper certificate from the State Board of Medical Examiners, was in violation of the law creating this Board; and providing that all persons practising medicine within the limits of the State shall first obtain the certificate of the Board, and that, "Any person shall be regarded as practising medicine within the meaning of this section, who shall profess publicly to be a physician and prescriber for the sick, or shall attach to his name the title 'M. D.', or 'Surgeon', or 'Doctor', in a medical sense".

Being convinced that the action of Bass in this matter was illegal, the State Board of Medical Examiners, through its Secretary, Dr. Van Meter, notified him that he must either obtain the license to practice or remove the word "Dr." from his

sign. When Bass refused to comply with the law in either of these ways, the Board of Medical Examiners laid the facts before the District Attorney and his deputies, including the evidence of one Stiess, who on account of some ailment in his chest, consulted Bass, "whom he believed to be some kind of new physician; and as stated by the witness, after taking off his coat and vest, he was placed upon an operating table and was tested in various ways, by sounding with the fingers, by working witness' arms and legs, by thumping his body, and examining his lungs with a stethoscope,—in fact, he was given just such an examination as is given by other physicians and surgeons,—and the diagnosis was that Stiess was suffering from asthma caused by the displacement of one of the bones of the sternum; and appellee (Bass) informed the witness that it would take a year, or probably more, to cure him." Bass "advised this patient that one of the bones of the sternum was displaced, that it must be put in proper position before he would recover from his disease, and that he could accomplish this in a year." Stiess took one treatment, for which he paid Bass, but did not return for further treatment.

Bass being indicted, his attorney made a motion to quash the indictment "upon the grounds, among others, that the terms used in the statute, to-wit, "Any person * * * who shall profess publicly to be physician and prescriber for the sick, or shall attach to his name the title 'M. D.' or 'Surgeon' or 'Doctor' in a medical sense, are too vague, ambiguous, indefinite and uncertain to sustain a con-

viction"; * * * "and that the further facts alleged in said information, as to the examination and treatment of Stiess by defendant, do not constitute the practice of medicine." The Court sustained the motion to quash the indictment.

Dr. Van Meter was then asked if the Board of Medical Examiners would refrain from any further prosecutions of unlicensed osteopaths. But being advised that such ruling of the court was in opposition to previous decisions of the Supreme Court of the State, and the courts of other states, replied that he would not abstain from such prosecutions until such a ruling was upheld by the Supreme Court. Thereupon Bass brought suit for damages for malicious prosecution, and under the ruling of Judge Mullins, the jury awarded him \$700.

This is the case that has been carried to the Court of Appeals, and it is especially hoped that upon it the Court will rule, whether or not the practice of osteopaths, including examination, diagnosis, prognosis and treatment as shown in this case, comes within the provisions of the statute regulating the practice of medicine in this State.

If it does not the legal significance of the phrase "practice of medicine" must be so limited that any individual who wishes to prey upon the credulity of the sick will be left free to declare himself outside of the operation of such a law. It has been known for years that the present law in Colorado was defective, although most of us did not believe it so defective as some of these rulings in the courts would make it. We will not stop to discuss the question as to whether laws to regulate the practice of medicine, or to regulate anything else, are desirable. Assuming that the general verdict of the profession and the public in all parts of this country, and in all other civilized countries, is correct—that such laws are right and desirable—

how long shall the Colorado law be allowed to remain so defective as to be practically a dead letter? E. J.

MEDICAL JOURNAL ADVERTISING.

The members of the Colorado State Medical Society have an interest in a medical journal that entitles them to know some things about the business of medical journal advertising, of which most readers of medical journals remain ignorant. They have a right to understand the policy adopted by the committee charged with the publication of *COLORADO MEDICINE* in regard to advertising, and the reasons for that policy.

The present members of the Publication Committee believe that it is the duty of the State and County Medical Societies to uphold the highest standard of professional ethics. To do this they are compelled to reject the majority of advertisements found in most medical journals. A careful count of the advertisements found in the two medical journals with which *COLORADO MEDICINE* would come into most immediate competition for advertising patronage shows that 57 per cent. of them, if offered for *COLORADO MEDICINE*, would have to be rejected as clearly opposed to the spirit of medical ethics. Most of them are of proprietary preparations—nostrums. Many of them are secret as to exact composition or methods of manufacture. Such preparations as "Pond's Extract" and "Syrup of Figs" are by no means the most objectionable of them. Eight per cent. are advertisements not especially appropriate to medical journals. This leaves but 35 per cent. that could be properly considered as at all eligible.

In the second place, advertising rates and discounts are such that for a journal with a moderate circulation, and which

tells the truth about its circulation, there is practically no profit in printing advertisements. A reputable drug firm, a medical college, or a medical book publishing house can dictate almost at its own terms to many so-called medical journals. Its advertisement is needed to give an air of respectability to the pages devoted to the puffing of proprietary medicines. This journal has been offered the opportunity of printing such an advertisement at a mere fraction of the cost of paper and printing. Another recent offer has been of "treasury stock of the company" in payment for two years' advertising of a certain mineral water. We have received repeated offers of exchange advertising. This is the way one reads: "Would you be disposed to make an exchange of one-half page in your journal for one-half page in the ——— for the coming year, on the basis of our respective card rates? It should be understood that such space shall be occupied with any acceptable advertisement now running in our respective journals."

Of course there are plenty of advertising agencies which claim to be able to place large amounts of advertising provided the terms are "satisfactory" to themselves and their employers. But the mass of what they have to offer is the advertising of proprietary medicines, and their terms are usually very unsatisfactory to the publishers of any respectable journal. A good deal of advertising is offered on the condition that "reading notices" shall appear—that puffs which are so nauseous in the advertising pages shall be sandwiched in among scientific papers, in the pretense that they are honest, disinterested opinions, instead of the claims and pretenses of the salesman.

The plain facts of the case are: that at present the advertising pages cannot be made an important source of revenue

to a medical journal unless advertisements are secured in such quantities as to overwhelm the reading matter; and they cannot be secured in such quantities unless those of doubtful, or notoriously bad ethical character are admitted. In view of the insignificant revenue to be obtained from ethical and appropriate advertising, it has been decided by the Publication Committee that for the present all advertisements will be excluded from *COLORADO MEDICINE*.

This exclusion may not be permanent. Already there is noticeable a new attitude toward advertising, on the part of the journals conducted by State Societies. There are now a dozen of these, each with a support that will give it permanence and independence. We believe that in the near future they will unite in a movement that will do much to free American medical journalism from the advertising disgrace. Within two months we have received communications from those in control of two of the strongest of these journals, which indicate a very promising attitude with regard to this subject. One contains a list of twenty-one advertisements to be found in the majority of medical journals, which have been excluded from the columns of this one. The other suggests in the form of questions a strong position to be taken against the worst of these advertisements. We quote as follows:

"First, do you agree to publish no advertisement of an internal or an external remedy unless the quantity of its active ingredients be published?"

"Second, do you agree to edit the copy submitted, and eliminate all so-called extravagant statements from it?"

"Third, do you agree that the journal should introduce to its members, through its advertising pages, only those firms whose reputation for commercial integ-

city is such that their preparations will prove to be what they are represented to be?

"Fourth, do you agree to keep alive in your journal, the question of ethical advertisements, so that the medical profession shall some day demand sworn statements of the quantity of the active ingredients of all internal and external medicines advertised in medical journals?"

We heartily agree to the above propositions; and we can go a step farther. The Colorado State Medical Society is both able and willing to support its journal, without help from those whose only interest in it would be as a means of promoting their commercial ventures. Other state journals could readily be placed in the same advantageous position; if those in charge of them would estimate success by the quality rather than the quantity of what they publish, and take pride rather in the use made of their opportunity, than in the amount of paper they send out through the mails. Still, when medical journal advertising can be placed on an ethical and sound business basis, there is no reason why the journal of a state medical society may not engage in it, and we are more than willing to do what we can to place it on such a basis.

E. J.

NOTE AND COMMENT.

Medical Legislation.—The Colorado Legislature which has just convened, seems at present to be very busy with big politics. Probably after some weeks it will get down to legislation and some consideration will be given to a bill to improve the medical registration law of the State. The vital point in such a law is the definition of what constitutes the practice of medicine. In this the law of Colorado, like the laws of many other states, is lamentably weak. The importance of

opponents of all such laws. Especially is it appreciated by the shrewd managers of the newspapers; who understand that the profitable business of advertising patent medicines and quacks depends upon keeping the public in a state of confusion and ignorance, as to who should, and who should not be regarded as members of the medical profession. If we are to make any headway in the struggle for an honest, efficient medical registration law, a united front must be presented to the enemy.

The Medical Bush-Wacker.—With the facilities for discussion furnished by our State, County and other medical societies, and the medical journals, it might be expected that differences of opinion as to the details of a medical law might be sufficiently discussed, overcome, and reconciled within the ranks of the profession. But it is a notorious fact what when a Governor, under the pressure of the newspapers, wishes to veto a medical bill; or a State Senator to earn his fee as the attorney of the osteopaths, undertakes to prevent its passage, these astute politicians are able to say with far too much truth, that their course is dictated by the privately communicated opinion of some honored member of the regular profession. Too often such member of the profession has never opened his mouth upon the subject in a medical society, or put pen to paper to advocate his views in a medical journal. He may even be grossly ignorant about medical legislation in general, or a thorough anarchist with regard to medical legislation, in spite of a strong desire for the protection of property rights in general. But he is very sure that he is right, and his colleagues all wrong, and is quite willing to defeat their best efforts if he can.

It is very difficult to deal with those who lack a sense of loyalty to their pro-

fession, and who are disposed to resort to the methods of the bush-whacker. About all we can do is to clearly characterize the class, and to express our opinion of them as a class. Although we may not be able to discover the particular individuals that belong to it, some of them are not so hardened as to be entirely indifferent to the expressed disapprobation of their professional colleagues.

ORIGINAL PAPERS

A CASE OF INFANTILE SCORBUTUS WITH REMARKS AS TO THE GENERAL FEATURES OF THIS AFFECTION.

By H. B. WHITNEY, M. D., Denver.

There is, in some respects, no disease of infantile life more important for the general practitioner than scurvy. This is true, in the first place, because of the great similarity of many of its manifestations to other diseases; and, also, more especially because the effect of prompt treatment is little short of marvelous.

Though much has been written about infantile scurvy since it was first described by Barlow in '83, it is to be feared that most of the literature, because of its appearance in specialistic publications, has escaped the attention of the general practitioner. The following case, though on the whole uneventful, will illustrate fairly well several important features of the disease, *i. e.*, its usual causation by proprietary foods; the rather indefinite symptoms presented by mild cases; the not infrequent failure to make a correct diagnosis; and especially the brilliant results of proper treatment.

Baby W., aged 14 months, came under my observation on July 9, 1904. As is not uncommon in this particular affection, she was born into conditions of affluence,

and, except for mistaken notions as to diet, had received every possible attention from birth. Three months ago the child had been in robust health; she had been upon the breast until a short time previously, when she had been weaned to cow's milk with the addition of Mellin's food. Because of a slight tendency to constipation the diet was then changed to Horlick's malted milk. From that time she ceased to gain in weight, but nothing especial seems to have been noted until about six weeks ago, when there was a sudden sharp attack of fever. This continued for some ten days, during which there was diarrhœa and the child was apparently quite ill. The physician in charge, in some southern locality, spoke of "catarrhal fever" and of typhoid. On recovery from this attack, which naturally left the child weaker than before, she was again put on Horlick's malted milk plus a certain quantity of Mellin's food; and she has now been upon this sole diet for the last month.

The parents now state that the child has failed to pull up properly from her febrile attack. For the past two or three weeks they have noticed particularly the following symptoms: In the first place she objects to being lifted, moved, or of late, even touched, and always cries whenever anything of the sort is attempted. They are at a loss to account for this, and are not even sure that there is any real soreness. Their physician in the south told them that it was probably rheumatism, or possibly the mere petulance of weakness. No advice was given as to diet, and a few days ago the child was brought north, still upon the same mixture of Horlick's and Mellin's foods combined. A second prominent symptom noticed by the parents is that since her illness the child no longer makes any attempt to walk, although she had previously begun to stand a good deal upon her feet. Then, finally,

there have been much fretfulness, considerable loss of flesh, and increased general weakness, or at least an entire failure to regain the ground lost during the acute attack.

Other signs of scorbutus were few and only discoverable on questioning and physical examination, but none the less significant as confirming the diagnosis. The child was found sitting up in bed and playing quietly with her toys. She appeared to be in fairly good flesh, though certainly in marked contrast with photographs taken three months before. There was some pallor and possible a slight suggestion of cachexia. There were no swellings or special tenderness of the joints, and no purpuric or other discolorations of the skin with the exception of a marked purple color of a recent scar of vaccination. The gums were more characteristic, though the parents had noticed nothing; there were several incisor teeth, and about these the gums were slightly swollen and reddened and their free margin showed a purplish line apparently almost ready to bleed. On inquiry it was found that two days previously there had been a very slight epistaxis, regarded as of no importance. There was perceptible beading of the ribs but no other special evidences of rickets. In all other respects the child appeared to be normal, had no fever, slept well, and digested perfectly.

The diagnosis in this case was of course extremely easy for any one at all familiar with the signs of scorbutus. Aside from the dietetic history, there were the characteristic soreness on lifting, which ought always to suggest scurvy, a pseudo-paralysis, a perceptible gingivitis, and epistaxis—a very unusual occurrence in an infant and sufficient of itself to arouse suspicion. The customary treatment of scurvy is so certain in the treatment of scorbutus that it was therefore begun at once—a fresh milk formula containing two ounces of

cream, and four of milk to the pint, two teaspoonfuls daily of beef juice, and a tablespoonful of orange juice twice a day. This disease that there was no hesitation in promising marked improvement in three days.

At my second visit, one week later, I was met by the grandmother with the exclamation that she had “never seen such a marvelous change in any person—she is a different child”. This change had begun at the end of 48 hours and since then recovery has been uninterrupted. There was no further pain on lifting, the food was taken greedily and well borne, the child was happy and contented, and there had been a gain of half a pound in weight. A week later the little girl had begun to stand on her feet. The milk had in the meantime been considerably increased in strength, a little mashed potato added to the diet, and at my fourth and last visit, on July 30th, the patient was already far advanced toward perfect recovery.

In connection with the foregoing case it may not be amiss to review briefly some of the salient features of infantile scorbutus. This disease in infants, as in adults, is essentially a form of malnutrition. It occurs chiefly from the sixth to the eighteenth month, although it would appear that no age is wholly exempt. Scurvy is almost never found in breast-fed infants, and then only when the supply is wholly insufficient. It is nearly always associated with the extensive use of either condensed milk or one of the proprietary foods. When it is remembered that condensed milk in the usual strength, say of 1 to 12, contains only about one-third the amount of proteid and one-sixth the amount of cream to be found in ordinary milk; and when it is considered that Horlick's malted milk, for example, contains, according to Holt, only 0.39 of fat as against the normal 3 per cent. of mother's milk, it is only surprising that the

prolonged use of such foods does not constantly result in some serious nutritive disturbance. As it is, rachitis in its milder forms is an exceedingly common disease among the poorer classes, while among the well-to-do, by whom the expensive proprietary foods are more largely used, scorbutus is undoubtedly a much more frequent affection than statistics would seem to indicate. Jacobi alone has encountered no less than forty cases of infantile scurvy. Considering then the not infrequent development of these more serious disturbances in children who are fed habitually on notoriously imperfect foods, it does not appear improbable that a much larger number of those so fed are at least improperly nourished, and do not develop into the robust and rugged children that nature intended them to be. It seems very desirable that more attention be given to the question by the average practitioner, and that much greater caution be displayed in recommending the exclusive use of condensed milk and the proprietary foods. It is certainly my own impression that many physicians are still extremely careless in this very important matter.

The most noticeable pathological condition in scurvy, in the infants as in older people, is the increased tendency to hemorrhage. Hence, in well advanced cases, the symptomatology of the disease consists largely of the appearances and results of the various forms of hemorrhage. One of the most important and characteristic of these is the subperiosteal, which is especially prone to occur about the diaphyseal ends of the femur, not infrequently also of the tibia and fibula, and less often beneath the periosteum of the flat bones; even the vertebrae are not exempt. In a typical case, as for example at the lower end of the thigh, such a hemorrhage may cause a large, more or less fusiform swelling in the neighborhood of

but not involving the knee joint. There may be separation of the epiphysis, with crepitus; the muscles are often infused with blood, and the adjacent skin may present more or less extensive areas of ecchymosis. Such swellings are exceedingly tender and painful, and when multiple, the condition of the child is very pitiful. Other hemorrhages of more or less frequent occurrence are: epistaxis, which as in the case reported may be a very important symptom; purpuric spots or larger extravasations into the skin; bleeding from the rectum or vagina; hematuria, which in a case recently reported was the only symptom of the disease; bleeding of the gums, usually associated with a more or less severe degree of gingivitis in children with teeth; bleeding from the ears; and, finally, the graver forms of internal hemorrhage, such as into the pleural cavity or beneath the capsule of the liver or spleen. In all advanced cases with marked hemorrhagic tendency there is always a noticeable degree of anemia or even cachexia corresponding to the diminution of erythrocytes and hemoglobin which blood examinations have shown. Naturally such children are emaciated, fretful, in constant pain, contented, at most, only when absolutely quiet, and presenting various degrees of debility and exhaustion. A fatal termination is not infrequent.

Much more interesting and important are the symptoms in milder forms at a time when, as in the case reported, but little damage has been done, and a rapid restoration to health is easily effected. It can scarcely be doubted that the number of these cases is much larger than statistics would indicate, many of them resulting in simply impaired health and vigor, rather than in the well-marked and possibly fatal syndrome of pronounced scurvy. The most important symptom in mild and recent cases is unquestionably

pain. This is the result of a more or less general periosteal tenderness and is manifested by an unwillingness to be lifted or even touched. The child cries and frets whenever it is moved in any way, and is only happy, if at all, when allowed to remain constantly undisturbed. This peculiarity of an infant should always suggest either congenital syphilis or scurvy.

Closely allied to the foregoing is a more or less complete cessation of attempts at locomotion. Parents notice very quickly when a child no longer tries to creep or walk, and the importance of this symptom is correspondingly great. Because it is found that apparently the limbs cannot, as hitherto, sustain the weight of the body, and that they are not moved when the child is set upon them, the thought of paralysis is often aroused in both parents and physician.

Less important because less frequent and perhaps less noticeable early symptoms are the various visible forms of hemorrhage. These have already been referred to and need not again be enumerated. In connection with the gingivitis of scurvy it is interesting to inquire, as has been done by others, whether certain cases of ulcerative stomatitis may not depend primarily upon a similar form of malnutrition; if so the dietetic treatment of stomatitis may occasionally prove of great importance. It should perhaps again be emphasized that any form of hemorrhage may be the only discoverable symptom of scorbutus.

The diagnosis of infantile scurvy is exceptionally easy in most cases; no other affection of early life presents the combination of a certain sort of improper feeding with the rapid development of painful joints, gingivitis, hemorrhage and cachexia. Frequent mistakes which have been made were due in part to prominence of a single symptom, and in still larger part to lack of familiarity with the gen-

eral features of the disease. Thus Holt mentions a case put in splints for an os-titis; in another a scorbutic swelling over the lumbar vertebræ was diagnosed as Pott's; still other cases have been called rachitis, rheumatism, purpura, osteosarcoma, melena, Parrot's disease, and infantile paralysis. Cases sufficiently advanced to simulate locally many of the above affections would scarcely fail to present a symptom group sufficiently characteristic to one on the alert for scurvy. The only possibility of confusion to be taken seriously would seem to be with rachitis, purpura, the so-called pseudo-paralysis of infantile syphilis, and infantile paralysis.

Rachitis has many factors in common with scorbutus. Indeed, until within recent years, the two were thought to be identical, and what we now recognize as scurvy was formerly termed acute rachitis; and while to-day the two affections are regarded as wholly distinct, they are very frequently associated—a natural consequence of their very similar origin. But rickets is almost invariably a chronic disease of insidious rather than acute onset. The bony enlargements of rickets are usually symmetrical, rarely if ever painful. The child is slow to walk because of osseous and muscular weakness, and shows no evidence of tenderness about the joints, nor objection to being moved or lifted. There is in rickets no tendency to hemorrhage, and even in children with teeth the gums are not inflamed. Finally, rachitis never responds to a proper diet in a few days or even weeks. Purpura in its typical form bears little resemblance to scurvy. The characteristic feature of purpura is the appearance of numerous spots upon the skin; in scurvy this symptom is infrequent or at most only incidental.

It is quite possible that a case of scorbutus might be mistaken for infantile

paralysis: as, for example, in the one described where muscular weakness in the lower extremities was such a prominent feature. In the entire absence of pain, gingivitis, or hemorrhage, it might be necessary to investigate the electrical reaction which would, of course, in poliomyelitis, soon show degeneration.

The diagnosis of rheumatism in a case of scurvy could scarcely be made by one familiar with both affections in children. Rheumatism with marked articular swelling is certainly very rare at the period of infantile scurvy. Lighter manifestations of rheumatism are also, as a rule, attended by some fever, and wholly lack the hemorrhagic tendency usually discoverable in scurvy.

Finally, as to Parrot's disease or syphilitic osteitis: It is true that we find here a painful swelling of the extremity of one or more of the long bones, causing a pseudoparalysis of the affected limb. But this condition is observed oftenest in the earlier months of life. In my own cases the upper end of the humerus has been oftenest involved, resulting in immobility of one or both arms. The affected bones, though painful, show no ecchymosis; and usually cutaneous or other evidences of syphilis are present instead of the hemorrhagic tendencies of scorbutus.

The treatment of infantile scurvy consists essentially in the exclusive use of fresh foods. Fresh milk, with orange juice or the juice of other fruits, is perhaps the most important. Beef juice, or for children in the second year slightly cooked scraped beef, and at 16 or 18 months, a little mashed potato, are valuable additions to the diet. Medicines are of little importance, though it is probable that in convalescence such tonics as nuxvomica, iron and cod liver oil are of service in hastening full recovery.

TRANSPLANTATION OF THE CORD IN THE RADICAL CURE OF INGUINAL HERNIA.

By F. GREGORY CONNELL, M. D., Salida.

The chief indication for the transplantation of the cord, in the operative cure of inguinal hernia, is the formation of a new canal, and new rings, in proper relation to each other. The passage of the testicle occurs in embryonal life, and as a result, the presence of the cord necessitates a communication between the abdominal cavity and the scrotum.

In order to prevent the escape of the abdominal contents through this open-

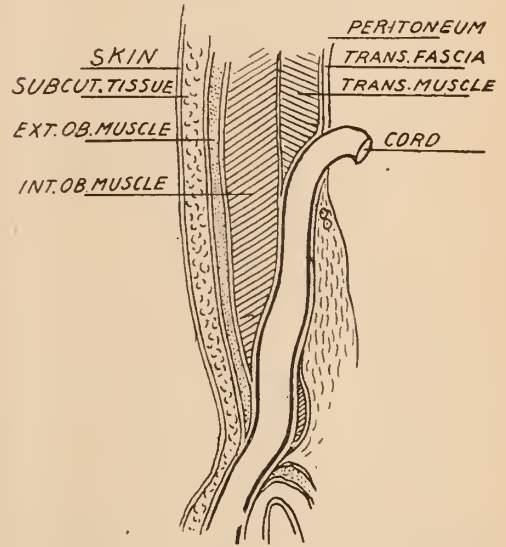


Fig. 1. Normal relation of cord to surrounding tissues.

the abdomen; that is, with a deep ring above and internal, and the superficial opening below and external. These are connected by a canal that contains the cord, but the lumen of which is normally obliterated by the apposition of the anterior and posterior walls. This obliquity or the indirectness of the inguinal canal is perhaps the chief factor in preventing the more common occurrence of rupture. ing, nature has made the passage way obliquely through the muscular walls of

When, for any reason, the intra-abdominal pressure is increased, this pressure is exerted at a right angle to the long axis of the canal, and has a tendency to hold the two walls in still closer apposition, and so help to prevent the formation of a rupture. (*See Fig. I.*) This same valve-like action is seen, naturally, in the prevention of the regurgitation of urine, by the oblique insertion of the ureters into

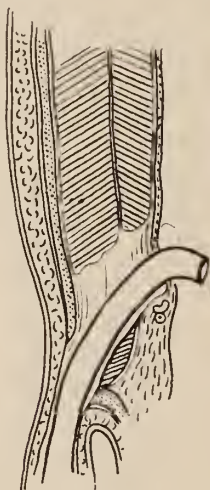


Fig. II. Inguinal canal abnormally dilated.

the bladder, and artificially, in the prevention of leakage, after gastrostomy, and again by the diaphragm after enterorrhaphy. Were it not for the obliquity, the pressure would be parallel to the long axis, and would cause a widening of the openings and of the canal. (*See Fig. II.*)

In practically all cases of inguinal hernia, there is found to be a decrease in the obliquity of the canal, and a widening of the rings. Therefore it has been reasoned: the radical cure will consist in the formation of new rings, and the construction of a new canal that will have the proper obliquity. This principle, including the transplantation of the cord, which we owe to the work of Marcy, Bassini and Halsted, has been of the utmost

importance in bringing the radical cure to that high standard upon which it now rests.

Despite the improvements in the results that have followed these methods, there is still some dissatisfaction, as can be seen from the number of new or improved methods that have been submitted. For example, the method of Ferguson is based upon the relationship between the internal oblique muscle and the internal ring. The deep or internal ring opens directly through the transversalis fascia, and under normal conditions is covered externally by the muscular structure of the internal oblique. With such circumstances, the attempt of any structure to pass through this ring will prove futile, because it will be forced back into the abdomen by the contraction of the internal oblique.

In practically all hernia the internal oblique has been found to either completely or partially expose the internal ring, leaving the aponeurosis of the external oblique to counteract all increase of intra-abdominal pressure. Active contractile muscular tissue is certainly of more value in this respect than is fibrous tissue, aponeurosis, even though this be distantly attached to muscle. Without this muscular check, at the very onset of an attempt to force a passage, the canal is much more liable to be made patent by a gentle and gradual insinuation of omentum or intestine at the internal ring.

Many operators have found the lower border of the internal oblique above the internal ring, but the majority of them have considered this to be the result of the protrusion of the sac. But Ferguson looks upon this malposition of the muscle to be a congenitally deficient origin of the internal oblique from Poupart's ligament, and as such, a cause and not an effect of the rupture. This view seems to be well substantiated by dissections and experi-

ments upon the cadaver, and operations for the radical cure, based upon this theory seem to be eminently satisfactory.

The transplantation of the cord is considered by many as an unnecessary and objectionable detail, and in recent work there may be noted a widespread disregard for the older teachings, with a tendency to avoid interfering with the cord, and in operating, to attempt to repair and strengthen the anterior wall of the canal, instead of making the posterior strong at the expense of the anterior.

After the general adoption of the Bassini type of operation Wolfer, in 1892, was perhaps the first to suggest that a radical cure might be effected without a transplantation of the cord. E. W. Andrews, in 1895, suggested such an operation, but did not recommend it. In June, 1899, Ferguson presented his method, which he had performed 64 times in the previous eighteen months. At this time he was very positive and enthusiastically recommended that the cord be left in its normal situation, and said, "Leave the cord alone, for it is the sacred highway along which travel vital elements indispensable to the perpetuity of our race."

Bloodgood, in the same year in his classical work on heria in the *Johns Hopkins Hospital Bulletin*, mentions a number of cases in which he did not transplant the cord, and suggests that in certain cases the cord be left in situ, and in others, that the veins alone be transplanted, leaving the vas deferens in its normal surroundings and attachments. He says that after the removal of the veins "The cord is then such a small affair that it is a question in my mind whether it is necessary to transplant it". In 1900 Girard, and in 1903 Hoffman, presented methods similar in that the cord is not transplanted, and in August, 1903, Halsted of Johns Hopkins Hospital presented a method strikingly similar to some of the above mentioned.

This list of similar operations, devised independently for the most, shows that a breaking away from the typical Bassini procedure is at hand.

The objections, more or less real, to the transplantation of the cord may be stated as follows: (1) An interference with the circulation and the function of the testicle. Orchitis and epididymitis have followed the Bassini type of operation in a certain number of instances. Even hydrocele and varicocele have followed in such a manner as to lead to the supposition that the operation served as a causative factor. These points are well covered by the statistics of Bloodgood, which show them to be rare occurrences in the hands of experts. But the fact that they do occasionally occur in such hands makes plausible the supposition that their occurrence in other hands is more frequent.

But that such sequels do occur will seem quite reasonable when it is remembered that the cord is torn from its natural surroundings, the meso-cord separated from its attachments, and after being roughly manipulated for a longer or shorter time, is placed upon different structures, sometimes upon a row of foreign bodies such as silver wire, or other suture material. The cord is subjected to additional and unusual traumatism in its new and comparatively unprotected location. The muscular structures that were normally in front, have been placed behind, depriving it of their protection, and at the same time forming a strong bulwark which acts as a counter pressure for any force from the outside.

(2) Strengthening the posterior wall at the expense of the anterior. The aim of the majority of operators, and of all those who employ the Bassini method, seems to be the construction of a new canal which will have an exceedingly strong floor or posterior wall. It would seem just as rational to devote the same, or less, time and

trouble in repairing the natural canal, and in making the anterior wall, or roof, exceptionally strong. The procedures in both instances will be about the same, the internal oblique and the transversalis are sutured to Poupart's ligament, in the one in front, and in the other behind the cord. A fact well worth considering, and not to be overlooked, in comparing these two locations, is that nature placed the internal oblique in front of the cord.

(3) The complexity of the operation. When compared with the newer methods, those which transplant the cord will be found to be more complicated and time consuming. They also necessitate more handling and in consequence more traumatism, of the structures; and again in consequence, a greater possibility of infection.

(4) Recurrence of the hernia follows the Bassini type of operation. But since modern improvements in technic, such as rubber gloves, improved absorbable suture material, and Coley's suture above the cord, the percentage of recurrences has become so small as to be practically disregarded. Recurrences have also followed operations of the new form, but these have been comparatively few, and a proper estimate of the percentage can not, as yet, be determined. Recurrence of the hernia will follow each and every mode of operating, in variable small percentages, for apparent reasons that can not be discussed under this title.

It will be readily admitted that these objections to the transplanting of the cord are of slight and insignificant importance when compared with the cure of the hernia. The problem before us may be summed up in the question: Is it necessary for the accomplishment of a cure of a hernia, to subject the cord to such manipulation, and dislocation, that the functional integrity of the testicle may be threatened?

If so, then further consideration is practically unnecessary, for the great gain, the cure of the hernia, will far outclass any small loss, such as a remote possible interference with the testicle. But if answered in the negative it is certainly far better to leave the cord in its normal situation.

The operation for the radical cure of hernia without interfering with the cord may consist of the following steps:

1. Skin incision.
2. Incision of the aponeurosis of the external oblique, with an exposure of the canal.

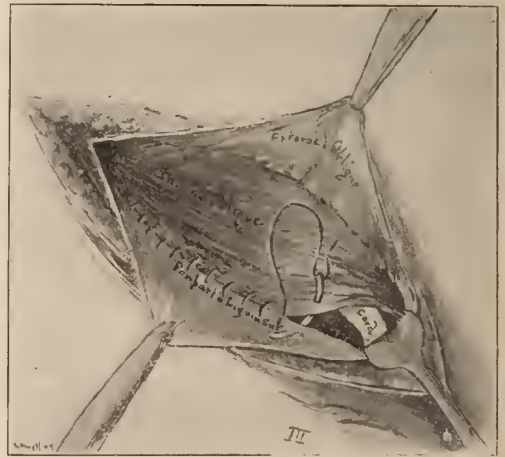


Fig. III. Suture of internal oblique muscle to Poupart's ligament.

3. Dissection and removal of the sac, after the reduction of its contents.
4. Decreasing the size of the cord, by the removal of fat and veins, if considered necessary.

These steps are the same as in the usual operation for hernia.

5. Repair of the internal ring. The transversalis fascia may be brought together at the upper margin of the ring, or the slack may be taken up below.

6. Suture of the internal oblique and the transversalis to the undershelfing of Poupart's ligament, for its outer two-thirds. (*See Fig. III.*)

7. Suture of the aponeurosis of the external oblique. This may be done by an ordinary suture, which with the above steps, comprise the typical Ferguson operation.

The imbrication or overlapping of the aponeurosis, as suggested by E. W. Andrews (*See Figs. IV-V*), with different

as one was complicated by an undescended testicle, and the other was operated upon for a recurrence after a Bassini operation, it would seem that they would not serve as arguments against the method.

The object in presenting this short review of the subject is to submit it as a



Fig. IV. Suture of aponeurosis of external oblique to Poupart's ligament.

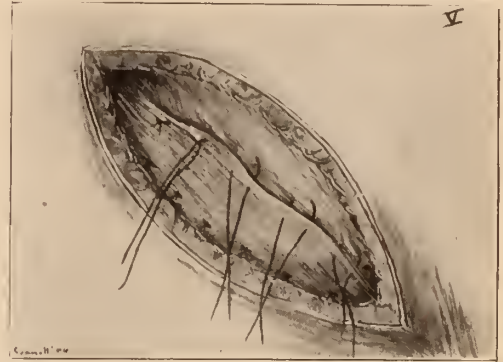


Fig. V. Sutures completing the imbrication of the external oblique.

variations and modifications, has been employed quite extensively of late and apparently with great satisfaction. It has aided in the compilation of the latest so-called Halsted operation of the Johns Hopkins Hospital, and is quite generally employed, whether the cord is transplanted or not. Another method of introducing this imbrication stitch as shown by Andrews at the time he first presented the method, is one in which the transversalis, the internal oblique, and the upper flap of the aponeurosis of the external oblique are all included in the loop of the stitch. This has the advantage of applying but one row of sutures to Poupart's ligament.

8. Closure of the skin.

The writer's experience has been confined to 32 cases in which the cord was not transplanted, and the internal oblique sutured to Poupart's ligament, according to the Ferguson technic. The external oblique was sutured in various ways. Of these 14 have been traced and heard from recently. Two have had recurrences, but

basis for discussion of the question of the transplantation of the cord, and to recommend the operation in which it is left in situ. The greater ease and simplicity, with the elimination of the danger of secondary changes in the testicle, are perhaps the more conspicuous reasons for its further trial.

EXTENSIVE BONE REGENERATION AFTER GUNSHOT INJURY INVOLVING THE LEG.

By GEORGE W. MIEL, M. D., Denver.

On September 28, 1903, George Weitzel, a young man 18 years of age, while hunting rabbits, was accidentally shot by his brother, in the right leg, transversely between the ankle and knee, from a distance of some twelve feet, with No. 4 shot.

The charge cut cleanly away all the soft tissues before the fibula, and cut away the tibia for two inches, together with the soft parts beyond; except, that a narrow

plate of the hard posterior portion of the bone, a quarter of an inch in thickness, remained continuous with the shafts for the greater portion of these two inches—a space of about half an inch intervening between the ends. For another inch at each side of this two-inch chasm, more than the anterior half of the tibia was shattered, pieces remaining slightly attached while others had better attachment, giving in all more than four inches of greatly damaged bone. The fibula retained its periosteal covering and was not damaged. The force of the charge may be appreciated from the fact that only four shot were found in the wound.

The injury was attended with great blood loss, two quarts or more, before hospital admission, and another quart within the next twelve hours.

The accident occurred near Littleton, twelve miles from Denver. By good fortune a physician, Thomas H. Hawkins, chanced to be driving near, and improvised and applied a tourniquet and bandages, sending him in a wagon with all possible haste to St. Anthony's hospital.

His condition upon admission about dusk was certainly unpromising. Having been anemic before the accident, his face and lips were now apparently bloodless. Immediate efforts were made for his restoration, including the introduction by hypodermoclysis of some two quarts of salt solution (part immediately and the balance a few hours later). Simultaneously the wound was given emergency attention. The bone fragments were grouped by strong ligature, and gauze was held firmly against the oozing ends by suture through contiguous tissue. The whole wound was then firmly packed and bandaged pressure instituted, while necessary tourniquet constriction was left above. Under the conditions it was feared he would not survive the night.

When the emergency was passed, how-

ever, several questions confronted us. Whether to amputate; or resect—which at this time meant shortening the fibula, and therefore the extremity, four inches; or to try to retain the leg with the hope of extensive bone regeneration, and if this failed make a less considerable resection.

The third course seemed clearly the right course; though pus, which would naturally collect for a long time while the wound filled, and more or less bone succumbed—chancing absorption with visceral changes—had to be reckoned with. This line of procedure was followed, and the urine watched, with decision to resect if the kidneys became seriously involved. No albumenuria was present throughout treatment. The bone fragments were held to the shafts of the tibia by wire circumclusion and the fibula sliding somewhat upward at the knee allowed the once separated, deeply situated ends to touch each other, and these were drilled and held in contact by wire. Temporary lateral wooden splints were first used, but within a week we were able to apply an encircling plaster-of-paris dressing, holding the foot at a strong right angle, and extending above the knee; this was reinforced by three strong galvanized iron strips and trapped at the wound in the whole circumference of the leg for some eight inches. In our efforts to force a covering for the bone we exhausted the usual means without sufficient encouragement until we utilized neatly prepared flaxseed poultices, under which favorable influence we quickly forced the necessary granulations of both soft tissue and bone. The periosteum, which had been stripped and torn away from the bone in the whole extent of the wound, reformed for fully an inch above and below; in the center anteriorly for perhaps two inches the soft granulation covering attached directly to the reformed bone, which now quite sufficiently filled the former gap. At the

end of some two months the patient was about on crutches. At three months it was thought a "Thomas" brace appliance could be used to better advantage than the plaster splint (the first having been replaced by one with a small trap edged with paraffine). This proved less useful and made an unnecessary expense. A neatly fitted plaster encasing splint applied to the knee and bearing snugly against the increasing head of the tibia (with a two-inch square trap) displaced this apparatus with advantage, and even permitted short distance walking without crutches.

It was anticipated the patient would make a good recovery and be able to discard crutches permanently a year from the reception of his injury; this I am glad to say has been his good fortune.

Aside from a little higher throw of the foot because of the loss of several inches of the whole extensor group of muscles, he walks very well. Keeping the foot at a strong right angle to the leg while encased in the splint has prevented a droop of the foot and toes which would otherwise be present.

There are legs that may be, and I am afraid often are sacrificed. His recovery of a good leg has seemed to be a surprise all round, and in his earlier treatment the case excited the remark—"In case you do save the leg, think of the time it will take and all the work"—to which I replied: "Think of the result if we achieve it."

Here was a young man with his future before him; he could have recovered much earlier and gone through the rest of his life with an elevated heel—two inches at least. Wherever he applied for manual work—which appeared to be his lot—his short leg would handicap him, and largely operate against him. No railway company or other examining corporation would employ him at other than the commonest labor. I am sure you will agree the effort was worth while.

AN IMPROVED X-RAY METHOD FOR THE STUDY OF BONE INJURIES AND FOREIGN BODIES.

By G. H. STOVER, M. D., Denver.

Let us first briefly consider some of the fundamental principles underlying the use of the X-ray in diagnosis, before taking up the special topic I have named in the title of this paper, as this is somewhat necessary for a full understanding of the reasons for the superiority of this method over the one commonly in use.

The X-ray, or Roentgen ray, is a form of energy originating at the target of a Crookes vacuum tube, generated by the impact of energy from the negative terminal or the cathode; this energy proceeds divergently from its point of origin; it becomes feebler with increasing distance of travel; it cannot be refracted or reflected from its course. It is said by some that a "diffusion" of rays takes place when passing through bodies of certain density or thickness, but I do not fully subscribe to this. The diffusion of the rays is said to be the cause of lack of clearness in skiagraphs of thick parts. My own belief is that this lack of clearness is due to rays formed on the walls and metal parts of the tube other than the target, and these rays, proceeding in different lines from those originating on the target, during the longer exposure demanded by thick parts, also affect the sensitive plate and thus blur the image.

For the diagnostic use of the X-ray there are two principal methods: fluoroscopy and skiagraphy. Fluoroscopy is a rather rough and inexact method as compared with skiagraphy. Both are made necessary by the fact that the X-ray does not cause a visual sensation in the retina, therefore we must use accessories to render the effect of the X-ray visible to us.

In fluoroscopy a chemical screen is

used. This is a surface coated with a chemical which will fluoresce, or glow with light, when acted upon by the X-ray. There are many of these substances, most prominent being the tungstate of calcium, and the platinum barium cyanide. Tungstate of calcium reacts with a beautiful white light, but has the disadvantage of being somewhat phosphorescent, that is to say, it continues to react for a little time after the X-ray has been cut off, so that it is less useful in fluoroscopy, than as an intensifying screen. When used in the latter manner it is enclosed in the holder or envelope with the sensitive plate, the chemical side next to the plate; it greatly shortens the time of exposure, but it causes a granular appearance in the developed plate, and in these days of extremely powerful machines, exposures are normally so short that a screen is not needed.

The platinum barium cyanide screen is almost exclusively used for fluoroscopy, it not being so good an intensifying screen as the other.

The results of fluoroscopy are very much less accurate than those of skiagraphy. Many details are lost on account of the uneven surface of the screen and its less delicate sensitiveness as compared to that of the photographic plate. And its own imperfections are accentuated by the limitations of the human retina, which at its best is well known to be unable to record light effects as well as the sensitive plate, and still less so when working under the trying light of the fluorescent screen. The skiagram gives us more than a shadow; it shows structural detail that the screen fails to record and, most important of all, it is a permanent record that can be studied at leisure, and it is a record that can be preserved indefinitely. This latter feature will be found of great value in watching the progress of bone repair after injury and during treatment, in

proving the existence of lesions and their having been corrected. No physician can afford, when it is possible for him to obtain the services of a competent skiagrapher, to neglect the information given by the X-ray, not only in discovering the nature and extent of an injury before treatment, but after treatment he should know if it has been successful, if replacement is correct, and if dressings are sufficiently retentive. The time is close at hand when failure to use this means in the handling of fractures and dislocations, will be evidence of neglect and incompetent treatment.

In medico-legal complications a technically correct and legally complete skiagram will often prevent expense and other injury to both parties of possible suits. The mere fact that the physician had insisted on an examination by the X-ray would go to show that he had exercised due diligence in his handling of the case.

In the skiagram, as usually made, we get information, mainly, of but two dimensions of the object, these dimensions being of planes more or less approaching a parallel with the surface of the plate; but of the third dimension, or of the dimension in planes vertical to the surface of the plate, we get practically nothing. It is true that one who is thoroughly familiar with the interpretation of negatives does get some knowledge from them of these other planes, but it is not sufficiently exact to be greatly relied upon. For instance, in the case of an oblique fracture of a long bone, with the plane of cleavage lying more or less parallel with the surface of the plate, the expert can often tell by certain features of the image, which fragment has its fractured end nearest the plate. Examine a skiagram showing a needle in the hand; the needle is plainly to be seen, but the skiagram does not tell if it is near the palmar or the dorsal surface, nor where it lies in the intervening

space. In an antero-posterior skiagram of a fracture of a long bone we get but little good information of antero-posterior relationship of fragments, only of their lateral relation.

In locating foreign bodies, it has been necessary to place several metallic markers on the skin to take two skiagrams, and then to go through an elaborate mathematic and geometric computation in order to get exact data, and in many fracture cases it has been necessary to take two skiagrams at right angles to each other.

For the process I bring before you, two skiagrams are needed, but the remainder of the examination is much simplified. Only exceptionally are markers needed, and then but one. It is not necessary to study separately two skiagrams taken from widely different points of view and then coax them to give a mental picture of the real condition.

In the improved method both pictures are combined into one, giving you a view of the parts almost as definite as if you had them before you stripped of all impeding tissues, or better than that, the flesh and other tissues which defy your unaided eyes are made to serve as landmarks in the stereoscope skiagram, or as I prefer to call it, the radio-stereogram.

I do not claim any priority in this matter at all, though I do believe myself to have been one of the very early workers in this line. Some of the Denver men will remember a radio-stereogram which I showed a few years ago. It was the skiagram of a ball of wrapping twine into which I stuck a number of pins in different directions. That was my first. My second was a sheep's kidney, whose vessels I injected with plaster-of-paris. The picture shows the branching of these vessels very well, and I think that gives us a hint of a fine method for the study of the circulation of various internal organs.

It is not necessary for me to dilate upon the advantages of this method, as I think it will be at once apparent to all of you what an advance we have here. You are all familiar with the stereoscopic views which used to be so popular. How much better an idea they gave you of the relations of different objects in the picture to each other than did a flat picture of the same scene. It is the same with the radio-stereogram. Instead of a flat view they give a relief effect, with full perspective.

As to the technique: a plate-holder, so arranged that a plate in its light-proof envelope can be inserted, withdrawn, and another inserted without disturbing the patient, who is placed upon it, is quite necessary.

If there are no good natural landmarks near the part to be examined, a metallic marker may be placed on the skin, its location being indicated by indelible ink or nitrate of silver. In looking for a needle do not use a piece of straight wire as a marker, and if a bullet is sought do not use a metallic disc, for very obvious reasons.

The tube is hung from a calibrated support. A point on this support is found, that is in a line perpendicular to the plate and passing through the center of the object to be examined. The tube is now placed so that the anode is a certain distance, varying according to the thickness of the part, to one side of the base point already selected on the tube support. An exposure is made, the plate withdrawn from the plateholder, and another plate inserted. The tube is then moved so that the anode is on the other side of the base point of the support, a distance equal to its former distance from it on the opposite side. Another exposure is then made.

For examination the finished plates are placed in a suitable light, side by side—there is a right and left in this arrangement—and they are then examined by

means of a special stereoscope. I use plane prisms of twelve degrees, with bases out. An ordinary parlor stereoscope will not do at all.

In looking at the skiagrams, arranged as I have described, you will see three pictures, when you are at a proper distance and your eyes are under control. Study the middle picture and you will be rewarded by a view of the parts that gives you their true perspective. There are other means of examining these negatives, but I think this is the simplest.

I have reduced some of my radio-stereograms to such a size that they may be viewed through the ordinary parlor stereoscope, and present them to you herewith for inspection. Naturally they have suffered some loss of detail in the process of reduction, but I think they will convey my idea to you. Others I show here in full size, and they may be viewed by means of the stereoscope, which I made myself.

If you are able to diverge your eyeballs you can examine these radio-stereograms without a stereoscope, which I do constantly. This feat is performed by attempting to look through a point midway between the negatives or prints and focusing the eyes for a distance far away. The pictures will then gradually merge into the stereoscopic view when the proper degree of divergence is attained, and the trick will be found a very useful one in this work.

It will pay you to look at these pictures carefully, as details will appear after a few seconds that you do not notice at the first glimpse.

FINAL REPORT OF CASES OF CONGENITAL DISLOCATION OF THE HIP, AND EXHIBI- TION OF PATIENTS.

By GEO. B. PACKARD, M. D., Denver.

I wish to present before the Society today two cases of congenitally dislocated

hips, which were operated upon by Dr. Lorenz two years ago. They were shown before this Society at the end of one year, soon after the removal of the plaster dressings.

Sufficient time has now elapsed to present fairly the ultimate results in these cases. It will be remembered that Dr. Lorenz operated on six cases in Denver at that time, by forcible reposition. Four of these cases have been under my personal observation until quite recently. At the end of six months the X-ray showed that two were in perfect position and in the other two, the head was below the anterior-superior spine of the ilium; the same condition existed at the end of one year, when the children began to walk without the plaster splints. Three of these cases were presented before this Society at that time. The two cases in which the head was in the acetabulum, showed no shortening. The only abnormality noticeable at that time was, perhaps, some eversion of the foot and slight lameness from weakness or habit. After two years' observation in these two cases the replacements remain perfect; there is no shortening, motion is good and the eversion and lameness has mostly disappeared. I have operated on four cases since that time, three of which are in position, judging from the appearance and the X-ray picture. Only one has been operated long enough to have the dressings removed. In this case nearly two years has elapsed, and the father of the child writes me from Texas, September 5, "that the child does not limp at all, and if one did not know of her former lameness they could not tell that there was ever anything the matter with her." Judging the ultimate results from the cases observed here, about two years after operation, the percentages of permanent repositions is sufficiently large to speak well for the operation of forcible replacement.

EDUCATION VS. LEGISLATION.

By R. W. CORWIN, M. D. Pueblo.

Perhaps we might better say education and legislation.

Human laws seem necessary to man's existence. Until the millennium overtakes us laws will continue to be enacted. Laws are intended to protect the innocent and punish the criminal, but they often work a hardship on the former while the latter escapes. Many laws go unheeded through ignorance; when understood they often become inoperative because unbroken. The medical profession has unselfishly interested itself in the making of sanitary laws for the benefit of the masses. The public, through ignorance, frequently misunderstands and unjustly criticises.

The doctor is charged too often with legislating for selfish motives, and opposition is strong enough oftentimes to defeat his efforts. When the public appreciates the doctor's motives opposition is not only removed, but frequently his actions are heartily supported. Sometimes it seems as though a suggestion emanating from the medical profession is especially irritating to the laity, and is promptly met with disapproval.

When a medical or sanitary bill is presented to a legislator he must be educated before he is willing to father the bill; and if it pass, a majority of both houses must also be educated upon the merits of the bill. After the bill becomes a law the people in turn must be educated before it can become effective. This takes time, often valuable time.

For illustration, take the noted case of the Chinaman who practiced medicine in this State without diploma, examination, or certificate. The law was plain, but the people were not ready. It took years to educate the people, and some still insist he was a wonderful healer. Slatter had a

tremendous following for a time. Vaccination has had a struggle, and there are those yet who throw every obstacle in its way. Authorities meet with difficulties in establishing quarantines.

Embarrassment is encountered in protecting the public against poisons and adulterations. Ignorant midwives, "occult scientists" and notorious quacks go unpunished. The laws enacted to protect the public are sufficient, but until understood they will remain valueless. Then, after all, the masses must be educated to comprehend the meaning of a law before it can be generally enforced. Would it not be better to begin from the educational side and enlighten first, or at least educate in conjunction with the creation of a law? We are not opposing the making of good laws, but wish to hasten their usefulness. True, there are some who must be forced into obedience, and law is the only means of reaching such; but people as a rule are anxious to do right, and do wrong through lack of knowledge of right.

Only by general education can evil be corrected. This is not the place to treat this subject specifically, but in a general way may it not be said that the medical profession can do more for mankind by promoting education in certain directions so that people will desire to do that which is by us thought to their advantage? Would it not be better to do this than to spend so much time in framing and passing laws and attempting to force people into doing that which they do not understand and in which they are not prepared to co-operate?

When the people learn that diseased germs may be conveyed by water and milk, flies and cockroaches, dogs, cats and other pets; when they understand the benefits of antitoxins and asepsis; when they know the nature and treatment of tuberculosis,—law will rarely need be enforced. When the real cause of yellow

fever was discovered, Cuba resorted to little law to free the island of that plague.

When the truth regarding gonorrhœa is generally known the disease will be far less prevalent. Boys who now have no dread of it will fear it, girls will be more guarded whom they marry, brothers more willing to protect their sisters. Then there will be fewer cases of infantile blindness, less laparotomies, more happy marriages.

We may make laws, but they cannot be enforced successfully before the reason of their existence is understood. Public opinion must come first. It can only be accomplished by education. Then let us as physicians institute an educational crusade; perhaps, more properly speaking, a more vigorous educational crusade against the evils which vitally interest us professionally. Let us promote the facilities for learning sanitary evils, physiological errors and hygienic fallacies, for detecting medical frauds and deceptions, for uncovering the pitfalls of the quack, the luring snares of the "paths" and the "ists." Let us give more attention to the instruction in the public schools, colleges and universities. Let us strive to have better teachings from newspapers, aid the pulpit in proclaiming physical truths, and further an interest in home instruction.

We may make a most excellent beginning by correcting some of the text-books on physiology and hygiene, and improving instruction on the general rules of health and living, as taught in the public schools; and above all by having the public school teaching done by a scientist and not by one who has no knowledge of the work or interest in it.

There is no better place for us to begin our crusade than in the school. There more can be accomplished than in any other place at our command. Teach the children and they will help to teach the

parents. Teach the children the rules of health that every person should understand. Why over-inhabited quarters beget deficient physical resistance, unclean habits, poor nourishment and low morals. As Cohen has said, "The miseries of Lazarus are visited upon the children of Dives". Teach the advantages of exercise, the disadvantage of over-exercise. How the lack of development may deform, illustrating by the cowboy's bow-legs, the tailor's worsted palm and the shop girl's contracted pelvis.

Teach the injurious effects of over-eating as well as those from starvation; the dangers of intestinal autoinoculation, and the injurious effects resulting from cystic retention. Teach the uses (if it have any) and the abuses of alcohol.

Do not teach a child a mass of absurd and rare exceptions, as found in some school physiologies, but tell the simple truth, which is plenty bad enough.

Teach them so they will not drown an injured man in whiskey or prescribe liquor for snake bites. Have them study the reports of Dr. Taaslaitmen regarding the increased susceptibility of animals to infection by the use of alcohol.

Teach preventive medicine in the most liberal sense of the term. Teach the value of sunlight, air, simple foods, pure water, bathing, exercise, work, recreation, rest and sleep. Teach the importance of understanding the causes of disease and the transmission of infection. Teach a certain amount of pathology and bacteriology scientifically. The time has arrived when every school course should include something of these sciences. Teach how to keep well; that is the all-important matter. A well child is worth a dozen sick ones; a sick man is a burden to himself, his family and the State.

Health is the most important element in the economy of man. Teach children

to think intelligently of their environments and how to correct their mental and physical, imaginary and real, ills.

Educate the public in the causes and preventions of disease. Clear away the mist of mystery, instruct the scientists in science, and give the "osteos" a skeleton. Educate the people and they will care for themselves and protect their neighbors. Educate and there will be fewer fanatics, quacks and impostors. What is needed is education for the masses and laws for the few. Educate the masses and needed laws will follow naturally. Educate and legislate, but educate first.

**FRANK FINNEY, M. D., PRESIDENT OF THE
COLORADO STATE MEDICAL
SOCIETY.**

Frank Finney was born at Martinsburg, Knox County, Ohio, May 13th, 1858, the eighth child and fourth son of Rev. Thomas and Jane (McKean) Finney. His father died in 1859; his mother in 1865. Through the following years he lived with a sister at Lawrence, Kansas, where he attended school through his boyhood. From the grade and high schools—earning his livelihood—he entered the University of Kansas, where he took his preliminary education.

After two years at the Kansas University he went East, taking his first course in medicine at the College of Physicians and Surgeons, New York; he graduated at the Medical Department of the College of Georgetown, D. C., in 1882, an honor man of his class. On the day of graduation he was appointed government physician to the Quapaw Indian Agency, Indian Territory. He married Grace Houghtelin at Lawrence, Kansas, in 1883, and a son and daughter have been born to them.

Resigning his post in the Territory, in the fall of 1884, he returned to New York City and entered Bellevue Hospital College, graduating in the class of 1885, and located soon after at Lawrence, Kans. In 1886 Dr. Finney was appointed surgeon in charge of the A. T. & S. F. Railway Hospital, at Las Vegas, N. M. In 1887 he was transferred to La Junta, Colorado, to have charge of the A. T. & S. F. hospital at that place, and made surgeon and assistant

manager for the Medical Department over the lines of this railway company in Colorado, and in New Mexico to Raton.

Dr. Finney became a member of the Colorado State Medical Society in 1888. He is a member, and was an organizer of his County Medical Society, and has for many years held membership in the American Medical Association. He is also a member of the Santa Fe Railway Medical and Surgical Society, and was chosen its second President. In 1893 he was sent as a delegate to the first Pan-American



FRANK FINNEY, M.D.

Medical Congress at Washington, and also went as a delegate to the next Congress, held in the City of Mexico in 1896. His contributions to medical literature have been offered, for the most part, through the Colorado State Medical Society. Among them: 1896, Report of Cases of Appendicitis; 1897, Radical Cure of Hernia; 1898, Report of Cases of Bone Necrosis Following Typhoid Fever (Supplemental report in 1904); 1900 Paper in Symposium on Syphilis; 1901, Paper in Symposium on Diseases of the Kidneys.

Dr. Finney has ever been one of the foremost in advancing the interests of his community. Aside from his medical relation, he has identified himself with and promoted

building, milling, canning, lighting, banking, electric railway, and other enterprises, whose benefits have extended beyond his own section to the state. G. W. M.

COUNTY MEDICAL SOCIETIES.

Boulder County.—The Boulder County Medical Society met in regular session at the County Court House December 1st, 1904, 8 p. m., with President W. W. Reed in the chair. Those present were Drs. Reed, Cattermole, Miles, Bell, Jolly, Trovillion and Gilbert.

Both essayists of the evening being absent, the time was devoted to the report and discussion of clinical cases.

Dr. Trovillion reported a case of a woman, aged 22, delivered twice within a year, in whom there were **no labor pains except those produced voluntarily**, and these seemed to be entirely under control. She would wait until he arrived, then deliver herself in about forty-five minutes, by producing pains when he so directed. The pain then seemed to be normal except that there was no suffering. The first child had apparently been dead two weeks, and the second was normal except for **umbilical hemorrhage** which was practically uncontrollable for two days. There was no history of hemophilia in the family.

Dr. Miles reported a case of **injury of the recurrent laryngeal nerve**. A man's neck was pierced by a flying crowbar. The condition was apparently not serious at the time, and the wound was said to have healed promptly. But at this time (two years later) he was unable to phonate. Examination revealed the fact that the vocal chord on that side was completely paralyzed. He concluded that the recurrent laryngeal nerve had been severed, and recommended an operation, which the patient promised to have done later, but has not so far.

Dr. Cattermole gave a further report of a case of **scorbutus**, which came to the University hospital in 1899 and again in 1902. Upon each of these occasions he was greatly cyanosed and there was general anasarca, particularly of the extremities, neck, face and genitals. The mucous membranes were swollen, and in some places ulcerated. The tongue and fauces were much swollen. The breath was very foul. There was marked mental hebetude. Temperature was subnormal and pulse normal. He was a bachelor about 60 years of age, lived a hermit's existence on a mining claim, and

lived mostly on salt meat and canned goods. Each time the recovery was wonderfully prompt on a liberal diet of fresh meat, vegetables and fruits. Each time he was well in a month, when he returned to his favorite haunt.

He re-entered the hospital November 24, 1904, his condition much the same as before. But in addition he presented a severe bronchitis, and the cyanosis was more marked. There was also quite a marked emphysema each time. This time he developed symptoms of pneumonia and died, November 29, five days after admission. The immediate symptoms which produced his death were those of asphyxia. The autopsy showed in both lungs a marked emphysema and congestion, with partial consolidation of the lower left lobe. The heart was very much hypertrophied, especially the right ventricle, which also showed considerable dilatation. His kidneys showed marked diffuse nephritis. No albumen had been found at any time.

Dr. Gilbert reported three cases of **cerebro-spinal meningitis**, one of which (a babe of six weeks) died. On the last case Ficker's test was tried and gave typhoid reaction. The cases occurred in the mining camp at Marshall and were reported to him by Dr. W. S. Craghead, for whom he made the Ficker's test. The cases occurred in the midst of a considerable epidemic of typhoid. The other two cases made slow but uninterrupted recoveries.

He also reported a case of ambulatory typhoid, in which the Ficker's test enabled him to make the diagnosis. The case was put to bed, thereby possibly preventing perforation, which occurred in a similar and even apparently milder case here quite recently. The patient made a good recovery in three weeks. The morning temperature was normal throughout.

The meeting adjourned until the first Thursday in January, 1905, at which time election of officers will occur for the ensuing year.

O. M. GILBERT, Secretary.

Denver County Medical Society.—At the meeting of December 6th Dr. Julia Seaton Sears read a paper on **Minute Pulmonary Hemorrhages and Their Relation to Early Phthisis**. She quoted at length the views of many writers regarding this subject and reported her own experience in several hundred cases in which careful examination of the chest had been made. In two of these cases

there had been hemorrhages not followed within 18 months by any other evidence of phthisis. There could be no question but that hemorrhage caused more mental disturbance than other symptoms of phthisis. These hemorrhages result from the tubercular infection through malnutrition, weakening the walls of the vessels which give way under congestion with the lung movements. In cases not followed by lung phthisis probably recovery of the vessels occurs through improved nutrition. To overcome the tendency to such hemorrhages the most important part of the treatment was systematic attention to deep breathing.

Dr. S. Simon found a hemorrhage was apt to be the first point mentioned in the history of the case, but it was always difficult to decide if it were really pulmonary. He also had found deep breathing the most effectual treatment and mentioned a case in which it had proved effectual after the failure of other measures.

Dr. B. Oettinger told of the case of a strong man subject to slight hemorrhages, who, after a more severe one, rapidly grew worse and died within 18 months.

Dr. M. Collins thought we could not take the patient's word as to the character of the hemorrhage. When the hemorrhage did occur before the other symptoms it gave an opportunity for early treatment.

Dr. Chas. Denison pointed out that the blood was arterial because it was the character of the blood in the pulmonary veins. Deep breathing was efficient by causing pressure in the air cells, emptying the vessels between them and giving a chance for the plugging of the openings in them by a clot.

Dr. W. N. Beggs found in his records seven cases of hemorrhage in which examination failed to reveal other evidence of pulmonary tuberculosis, for periods varying from some months to three years. We could not judge from hemorrhage as to the future course of the case. He had seen two cases in which hemorrhage occurring apparently as a vicarious menstruation had been the first symptom in a rapid phthisis.

Dr. I. B. Perkins reported a case of **healed gastric ulcer adherent to the liver**, encountered during an operation for gall-stone. In doing an operation for acute appendicitis the gall bladder was found full of stones. Five days later symptoms referable to this condition began

and ten days after the first operation the operation for gall stones was undertaken. The stomach was firmly adherent to the liver and was opened in the attempt to separate the adhesions. The opening in the stomach was sutured, the gall stones removed, the gall bladder closed and the patient recovered. The history of the case included symptoms of gastric disturbance extending over a period of ten years, including hyperacidity and inability to digest sweets and starches. Three years previously there has been an attack of pain with jaundice. But there had been no history of hemorrhage pointing to gastric ulcer.

Dr. Leonard Freeman said the case illustrated that more than one thing might be present with pain in the right side of the abdomen. The majority of cases of gastric ulcer did not give a history of hemorrhage. He questioned if it were wise to divide the adhesions of the stomach to the liver.

Dr. J. N. Hall had seen a case of gastric ulcer in which the liver was found in the floor of the ulcer. He also mentioned a case in which there was appendicitis, floating kidney, uterine fibroids, and signs of disease of the gall bladder.

Dr. Perkins, in closing the discussion, said that the absence of hemorrhage was remarkable in consideration of the size of the ulcer. In over 1,000 laparotomies this was the first case he had met of adhesion to the liver.

Dr. Charles Denison exhibited and explained an electrode which had been constructed for him for the application of the high frequency current to the throat.

It was resolved to change the place of meeting of the Society to the hall of the Denver Academy of Medicine, 1434 Glenarm street.

December 20th.

The Society met in the Academy of Medicine hall, 1434 Glenarm street.

Dr. H. B. Whitney read a paper upon "The Paramount Value of **Localized Rales as a Sign of Incipient Phthisis.**" In beginning phthisis percussion over the apices of the lungs gave uncertain results, even comparison of the two sides could not be relied upon. Impaired movement and fremitus come later. A prolonged, harsh, expiratory sound was important and when present must be regarded as highly suspicious; but it was often difficult to discriminate between normal sounds and abnormal. On the other hand, a few localized moist rales found constantly at the apex of one lung con-

stituted a sign of enormous importance, and often the earliest symptom that could be relied upon. He had discovered these rather more frequently behind. Sometimes they were to be heard over the apex of the lower lobe. The manner of eliciting them was very important. The patient must be taught to give a short, superficial, but genuine cough, one attended with little movement of the chest wall, so as not to displace the stethoscope. This was to be followed by a quick inspiration. These must be repeated and the rales carefully listened for over each inch of both apices. Such rales were not produced in healthy individuals. Then detection was essential for the diagnosis of phthisis.

Dr. S. Simon never depended upon the percussion signs. Having learned Dr. Whitney's method of examination he found the results very satisfactory. The rales could often be detected over the supra-spinous region when they were not heard in front.

Dr. Charles Denison, while attaching great importance to the recognition of rales, thought it was possible to give them too much significance. To his mind the presence of moist rales was an evidence of softening, showing that the phthisis was no longer incipient, but had reached the second stage. They were very significant as to prognosis, especially in cases in which the disease was apparently arrested. Rales might be produced after a short cough from the opening of air cells ordinarily not used.

Dr. J. N. Hall urged the extreme importance of the earlier recognition of tuberculosis. The trouble is the doctor usually defers until the appearance of all symptoms make it absolutely certain that there is pulmonary tuberculosis. Instead of this every case in which there was reasonable ground for the suspicion, ought to be treated as a case of possible tuberculosis. He believed it was better to have ten men all cured with some doubt as to how many of them really had tuberculosis, than to have five dead and five permanently damaged, and be "dead sure" that they all had suffered from the disease.

Dr. Wm. N. Beggs had independently reached a technique almost identical with that described by Dr. Whitney, but he began by listening to the sounds produced by normal respiration. The results of percussion were not satisfactory. He had been unable to detect the dullness spoken of by others, and had become to

thing this was due to his lack of imagination. He considered the rales produced by deep inspiration more important than those following coughing.

Dr. J. S. Sears called attention to the importance of rales occurring in non-tubercular persons. Cabot, of Boston, had found them in a very large proportion of normal individuals over 40 years of age. She had been especially interested in the rales found in women, who in sewing or from tight lacing, habitually used only a portion of the lung.

Dr. B. Oettinger also spoke of the rales of atelectasis found in asthmatic patients with emphysemic chests.

Dr. Whitney, in closing, said that dry rales, even those that were somewhat moist, were very common in old people, especially at the base of the chest, and in emphysema all over the chest. The particular rales which were of significance in early phthisis were the localized moist rales in the region of the apex.

Dr. G. E. Neuhaus presented "A Study of a Case of Traumatic Insanity," being a further report upon the case reported by Drs. Van Meter and Pershing (See *Colorado Medicine*, 1904, page 209). The marked symptoms were the patient's apathy, which had gradually diminished his loss of orientation, and amnesia. His sense of the chronological sequence of events was quite lost. The patient was now in good physical condition. The early auditory aphasia had greatly improved. But he was unable still to do complicated work. Recent impressions were not retained. He had in one instance shown a distinct illusion, and there was still irritability. But the patient has shown remarkable improvement, which is still going on.

Dr. J. E. Courtney illustrated the auditory aphasia of this patient by the difficulty his nurse had in getting him to undress at night. When told that the time had come for it he paid no attention to it; but the nurse found that by making the movements to take off his own coat, or loosen his collar, the patient very promptly responded.

Dr. S. D. Hopkins was interested in the retroactive amnesia. He had known this to cover a period of four months preceding the time of injury.

Dr. Neuhaus said that in this case it had been very difficult to determine this period because the patient had lost his sense of chronological sequence. But that he now could re-

member working in the shop shortly before the accident happened.

Dr. Oettinger said that insanity arising immediately after traumatism was usually confusional. If it began later it took the character of acute neurasthenia.

Dr. Pershing said that in this case the symptoms were at first overwhelmingly those of cerebral concussion. As these cleared up the symptoms of the localized injury began to appear.

Dr. H. G. Wetherill asked if in auditory aphasia the motor memories were not sufficient for the proper pronunciation of words without the assistance of auditory memories, how was it that the deaf were now trained to speak?

Dr. Pershing said that the training of deaf mutes to speak was accomplished only by special methods to which persons with hearing had never been subjected, and that the result was obtained only by great exertion.

Dr. Neuhaus pointed out that normal persons differ, some getting their impressions more by the eye, others more by the ear.

Dr. Pfeiffer reported a case of a child 8 months old that had **swallowed a safety pin**. An X-Ray picture showed the pin lodged in the esophagus opposite the third rib, spread as widely as the esophagus would allow, with the point directed upward. As the safest procedure he decided to push the pin into the stomach by the use of soft rubber bougies. The size of the esophagus he estimated by the spread of the pin. He first introduced a small bougie which seemed to encounter slight resistance when the pin was reached, and again on its passage through the diaphragm. Then a bougie 5-16 of an inch in diameter which would almost fill the esophagus was passed, meeting with no especial resistance. After this another X-Ray picture was taken showing the pin in the stomach. Seventeen hours after it was pushed into the stomach, it was passed in a stool without special difficulty.

Dr. Leonard Freeman suggested that although the outcome in this case was the best possible, it would generally be safer to do a gastrotomy and extract the pin from the stomach than to leave it to pass the whole length of the alimentary canal. He had seen two cases in which a foreign body in the alimentary canal had caused multiple perforations, abscesses and death.

Dr. J. D. Gibson had seen a case of swal-

lowed safety pin which was shown by the X-Ray in the stomach with its point apparently sticking into the wall of the stomach. Two weeks later the child was given a heavy meal of sponge cake, vomited freely and the pin came up in the sponge cake.

Dr. E. J. A. Rogers, who had seen Dr. Pfeiffer's case, stated that it had been intended to watch the patient closely, having radiographs made at short intervals, and if any indications for it arose to open the abdomen and remove the foreign body. But almost as soon as they had certain evidence that the pin had been pushed into the stomach, it had been passed from the bowel.

Dr. C. D. Spivak called attention to the recent article of Dr. E. F. Ingals reporting the removal of various foreign bodies by means of Killian's esophagoscope. (J. A. M. A., Nov. 19, 1904, p. 1514).

Dr. Pfeiffer stated that when the pin was passed it came point first, being probably partly closed by contraction of the muscle upon the sides of the pin.

El Paso County Medical Society.—The regular monthly meeting of the Society was held on Wednesday evening, December 14th, 1904. After hearing the reports of the officers of the Society for 1904, the members proceeded to the election of officers for 1905, with the following result:

President—James A. Patterson.

Vice-President—H. W. Hoagland.

Secretary—Michael P. Reynolds.

Treasurer—Daniel J. Scully.

Delegates—W. H. Swan, R. K. Hutchings.

Lists were distributed to members containing names of each Senator and Representative whose district in whole or in part embraces El Paso county, with the object that the members impress upon the minds of their legislative representatives the justice and value of a decent medical enactment for our State.

M. P. REYNOLDS, Secretary.

Las Animas.—The regular meeting of the Las Animas County Medical Society was held at the office of Dr. G. W. Robinson. Almost the entire membership was present. President Carmichael called the meeting to order. An exhaustive paper on "Headaches" was read by Dr. Jaffa, and was fully discussed, especially in regard to migraine. Many methods of treatment for the relief of migraine were presented,

some of which had been found effective and some otherwise. Reflex headaches, especially from errors of refraction, came in for a full share of attention.

Dr. Wm. Hutchinson from Trinidad was elected to membership in the Society. Since our last meeting we have received the dues from seven members who were behind with the State Society. They all expressed themselves as anxious to keep paid up, but by oversight had become delinquent.

The proposed amendment to the By-Laws submitted by Dr. W. A. Jayne of the Committee on Reorganization of the State Society, were adopted after slight alteration.

JAMES G. ESPEY, Secretary.

Otero County.—The meeting of the Otero County Medical Society was held at La Junta, December 6th, 1904. The following officers were elected:

President—A. N. Moody, Fowler.

Vice-President—F. W. Ragsdale, La Junta.

Secretary and Treasurer—E. G. Edwards, La Junta.

State Delegate—Jessie Stubbs.

The retiring President, Dr. J. E. Kearns, read a paper entitled "Suggestions to the General Practitioner for the Successful Practice of Medicine," which will appear in full in an early number of **Colorado Medicine**. Drs. Fisher Smith and E. K. Shelton, both of Rocky Ford; J. E. Ray, of Sugar City, and J. E. Jefferey, of Ordway, were elected to membership.

E. GARD EDWARDS, Secretary.

Weld County.—The annual meeting of the Weld County Medical Society was held in Greeley on the 26th of December. Dr. G. R. Pogue, President Pro Tem, in the absence of the regular President, Dr. W. N. Wood, called the meeting to order.

Clinical cases were reported and discussed.

A paper entitled "Mixed Infection in Phthisis" was read by Dr. G. R. Pogue. This will appear in an early number of **Colorado Medicine**.

Dr. Ella R. Mead was duly elected President; Dr. C. A. Ringle, Vice-President; Dr. Charles B. Dyde, Secretary and Treasurer, and Dr. C. H. Call, Delegate to the Colorado State Medical Society for the next two years. The members present were Drs. Pogue, Hughes, Law, Mead, Ringle and Call.

G. LAW, Secretary.

OTHER MEDICAL SOCIETIES.

Denver Clinical and Pathological Society.—

The regular monthly meeting of the Denver Clinical and Pathological Society was held December 9th, at 1427 Stout street.

Dr. Sewall exhibited the lungs of a male, presumably dead from thoracic aneurism, in which no aneurism was found post-mortem, the lungs, however, presenting evidence of **anthracosis**. Dr. Childs exhibited a skiagraph of the case, showing dense masses in both lungs; that in the right measuring 4 by 3½ by 2½ inches, those in the left being smaller. Dr. Wilder reported the pathology of the case, stating that a microscopic examination of sections from the pigmented areas of the lungs showed a dense mass of adult fibrous tissue, embedded in which were large quantities of black pigment without any regularity of arrangement, the pulmonary alveoli having entirely disappeared. The pigment not responding to the usual tests for iron, showed it not due to inhalation of iron dust, neither was it of hematogenous origin. Sections from the periphery of the masses show an overgrowth of connective tissue containing more or less pigment with considerable exudate into the pulmonary alveoli, and many dilated blood vessels filled with blood. No evidence of recent tubercles was found. Dr. Wilder agreed with Dr. Sewall that the condition was one of an extreme degree of anthracosis. The report of the case aroused a general discussion which was of much interest to the members.

Dr. Stover exhibited a skiagraph showing a **safety pin lodged in the esophagus** of a child, the pin being open and extending point upward. Dr. Rogers reported that by careful manipulation with bougies, Dr. Pfeiffer was enabled to push it into the stomach, the pin passing the anus 24 hours later.

Dr. Stover also showed a skiagraph of **carcinoma of the femur**. Dr. Lyman reported the case, which was one of fracture of the femur, in a woman suffering from carcinoma of the breast, treated 16 weeks with non-union, and resulting in carcinoma of the femur.

Dr. Hillkowitz exhibited microscopic slides from the liver.

Reports of Cases.

Dr. Hershey reported a case treated for a year for neurasthenia, now suffering from Ray-

sensation was experienced, except in cold **naud's disease** of the right foot. No loss of weather. Discussed by Drs. Hopkins, Edson and Lyman.

Dr. Beggs reported the case of a child 17 months old suffering from cardiac hypertrophy with regurgitation, rickets, cretinism, umbilical hernia, and undescended testicle.

Dr. Whitney reported a case of foreign body in the nose, removed by irrigation.

Dr. Edson reported a case of **edema** of the mouth, soft palate, eye, nose, etc., beginning immediately on taking some honey, and probably due to irritation of the 9th nerve. Treated by adrenalin with relief. Discussed by Drs. Beggs, Levy, Hickey, Stover, Edson; and Dr. Hill, who suggested that the irritation was probably due to an excess of formic acid in the honey.

Dr. Levy reported two cases of severe throat lesion: (1) **anterior epiglottitis** with symptoms of quinsy, treated by adrenalin solution; (2) case of **Ludwig's angina** in a Mexican who had been thrown from a horse, striking on his face and head. Subsequently there occurred a hard, board-like sublingual swelling. Treatment, adrenalin internally, poultices externally. Discussed by Dr. Stover.

Dr. Lyman reported a case of injury to a woman on a street car, who half fell and while clinging to the car was twisted about on one foot. A diagnosis was made of **dislocation of transverse processes of the lumbar vertebrae**. Later, when first seen by Dr. Lyman, the patient had severe pain above the sacrum and down the sciatic nerve. Treated by plaster cast with no recurrence of pain. Discussed by Drs. Stover and McNaught.

Dr. Freeman reported an operation for excision of the breast in a woman suffering for some time previously with intense pain down the arm, and tingling of the fingers, in which an anomaly was found consisting of strips of the *latissimus dorsi* muscle passing over the brachial plexus, thus causing pressure on the same.

Dr. Bonney reported a case of **septic pneumonia** in a woman of 52 years, of sudden onset, with pain in the right chest, chill, etc., but normal temperature and pulse. Pneumonic consolidation then appeared in both sides. Venesection was done twice, and aspiration of the chest four times, and later resection for a right empyema. Nephritis, phlebitis and endocarditis complicated the situation, death re-

sulting. Discussed by Dr. Mitchell, who gave an interesting talk on bacteriology, giving especial consideration to the theory of Ehrlich.

Dr. Hall exhibited a heart, which during life presented a presystolic murmur. The specimen, however, showed no involvement of the mitral valve, but a considerable number of vegetations on the aortic valve, this condition giving rise to the so-called Flint's murmur.

F. W. KENNEY, Secretary.

The Denver Academy of Medicine held its first meeting in its new hall, Monday evening, December 19th. Reports were presented by the Secretary, Dr. C. K. Fleming; Treasurer, Dr. F. E. Waxham; Librarian, Dr. C. D. Spiyak, and the Secretary of the Trustees, Dr. E. Jackson. Remarks in discussion of the purposes and plans of the Academy were made by Drs. J. W. Graham, W. A. Jayne, R. Levy, T. H. Hawkins, E. J. A. Rogers, W. W. Grant and G. B. Packard. Donations of books, periodicals and money, to the value of more than \$100, were received.

Alumni Association of Denver and Gross College of Medicine.—The second regular meeting of this association was held at the College building, Fourteenth and Arapahoe streets, Saturday evening, December 10th. Dr. Stover read a paper on "Electro-Therapy of Acne," and other members reported cases. Present, 30.

The officers are: President, Dr. I. B. Perkins; First Vice-President, Dr. T. M. Burns; Second Vice-President, Dr. M. E. Preston; Third Vice-President, Dr. F. M. McCartney; Secretary, Dr. C. G. Parsons; Treasurer, Dr. G. M. Blickensderfer. Meetings are held on the first Saturday of each month, except June, July and August.

The Colorado Ophthalmological Society.—The Colorado Ophthalmological Society met December 17th, 1904, at the office of Dr. Friedmann, of Colorado Springs. The meeting was occupied by the exhibition and report of cases and their discussion.

The Atchison, Topeka and Santa Fe Surgeons met at Topeka, Kansas, December 8th and 9th, 1904. Otero county was represented at the meeting by Drs. A. N. Moody, of Fowler; E. W. Kearby, of Rocky Ford, and A. L. Stubbs of La Junta.

DEATHS.

Dr. John T. Wills died at his residence at Sulphur Springs, Grand County, December 2nd, 1904, aged 44 years. He was a graduate of the Kentucky School of Medicine in the class of 1890. He came to Colorado on account of his health several years ago; and settling at Hot Sulphur Springs took an active part in the life of that community. He was a member of the Medical Society of the City and County of Denver.

Dr. Johann J. Eisenhut died at St. Anthony's Hospital, Denver, December 28th, 1904, at the age of 104 years. He was a native of Switzerland and had resided in Colorado 31 years, most of the time in Central City, where he was engaged in active practice. For several years he had been living at St. Anthony's Hospital, where many of the physicians of the state who had occasion to visit that institution, had made his acquaintance.

NEWS ITEMS:

Denver County Hospital.—The equipment of this institution has been improved by the addition of surgical instruments and appliances, to the value of several hundred dollars. A new pathological laboratory has been fitted up, new quarters provided for the eye, ear, nose and throat departments, and an X-Ray outfit secured. The staff of the hospital for the coming year will include a number of new men, while some of those who have been most active in its work for several years have been dropped.

Physician's Hospital.—The regular physicians of La Junta have organized a stock company for the purpose of building a hospital, and also a sanitarium for tuberculosis. The two establishments will be kept separate, although under the same control. Every regular physician of the city has joined in the application for the charter. The capital stock is placed at \$25,000.

Dr. E. K. Skelton, formerly of Buena Vista, has removed to Rocky Ford.

The **Woman's Medical Society** is being organized in Denver, for the purpose of sustaining a dispensary service, and possibly opening a hospital. The dispensary will be opened at 1924 Delgany street, some time in January.

BOOKS.

Laboratory Manual of Human Anatomy.—By F. L. Barker, M. D., Professor of Anatomy in the University of Chicago. Octavo, 583 pages. 298 illustrations. Philadelphia and London. J. B. Lippincott & Co., 1904.

The "dissector," so much used as a guide in the practical study of anatomy a generation or two ago, has not of late years occupied so prominent a position in medical literature as it did formerly; possibly because it did not keep pace with the development of medical looks in general. No lack of such development is apparent in this manual. Its illustrations are beautifully executed and clearly lettered. In many of them the different structures, especially the vascular systems, are brought out by the use of colors. Different styles of type and paragraphing are used to throw into relief the important fact. This arrangement of the letter press, with the illustrations, makes it a book for ready reference in busy practice as well as for the laboratory. The plan of giving English names for the different structures mentioned is to be heartily commended, in a work published in the English language. The Latin equivalents are added in italics. It is noticeable, however, that Latin names are used in many of the illustrations, apparently being carried over from other books from which these illustrations have been taken. Barker's manual marks a distinct advance in books of this class.

Leprosy in North America.—By Isadore Dyer. This pamphlet of 37 pages is a reprint from the Transactions of the International Dermatological Congress held in Berlin last September. Although the transactions in general appear in German, this article is published in English. It contains an excellent review of the literature referring to its subject.

Annals of Surgery, a Monthly Review of Science and Practice. Edited by L. S. Pilcher, M. D., LL. D., Philadelphia. J. B. Lippincott & Co.

This standard journal celebrates the completion of its 40th volume by making the December issue double the usual size, 280 pages. It makes a volume that compares very favorably with most of the "festschrifts" with which the Germans are wont to celebrate anniversaries. It contains articles by Orth, of Berlin; Watson Cheyne, of London; Nicoll, of Glasgow; Alessandri, of Rome, and Dyball, of Exeter, England, besides such well-known American writers as White, Warren, W. J., Mayo, Scudder, Shepherd and others.

It is a notable fact that during the 20 years of its existence the *Annals* has had no rival in its especial field, published in the English language. This may be partly due to the publication of surgical papers in the general medical journals; but also to the admirable way in which Dr. Pilcher and his collaborators have gathered and presented to their readers the best papers on surgery written in or translated into the English language.

American Medical Association

Next meeting at Portland, Oregon,
July 11-14, 1905.

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Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

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Boulder County, first Thursday in each month.....O. M. Gilbert, Boulder
Denver County, first and third Tuesday of each month.....
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El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, Septem-
ber and November.....R. C. Adkinson, Florence
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ber and November.....L. A. Robinson, Glenwood Springs.
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Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Thursday in each month..E. G. Edwards, La Junta
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and OctoberH. C. Lefurgey, Durango
San Luis Valley, last Saturday of February, April, June, August, Oc-
tober and December.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month....C. W. DeLannoy, Telluride
Teller County.....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

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And its Constituent Societies.*

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Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

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1908—C. F. Gardiner, Colorado Springs; S. D. Hopkins, Denver.

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1906—P. F. Gildea, Colorado Springs.

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(To be named by the El Paso County Medical Society.)

COLORADO MEDICINE

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No. 2

LEADING ARTICLES

THE NATIONAL ASSOCIATION FOR THE STUDY AND PRE- VENTION OF TUBER- CULOSIS.

This Association was formed at the annual meeting of the American Medical Association held in Washington, D. C., on the 18th of May. It will be affiliated with the International Bureau for the Prevention of Tuberculosis, which has its headquarters in Berlin, and will also represent this country as one of the constituent societies at the International Congresses for Tuberculosis, the next of which will be held in Paris during the present year.

The officers are: President, Dr. Trudeau; Vice-Presidents, Drs. Wm. Osler and Hermann M. Biggs; Treasurer, Gen. Sternberg; Secretary, Dr. H. B. Jacobs, of Baltimore.

The management of the Association is in the hands of a board of thirty directors composed of representative physicians from the principal sections of the country, and a few distinguished laymen. All physicians in good standing are invited to become candidates for membership, also laymen of repute who are interested in the objects of the Association, as it is desired to make the field of work and education as wide as possible, and also to procure a good income for the Society. A considerable portion of this income will be spent upon various publications which will be sent free to members.

There has just been distributed by the

Society a hand-book for the prevention of tuberculosis, published under the supervision of the charity organization of the City of New York, and a directory of institutions and societies dealing with tuberculosis in the United States and Canada is now being printed. It is hoped that before long the Association will have its own journal. This will be a feature of great value, as those of us who are interested in tuberculosis will appreciate finding collected in one magazine the literature for which we have to painfully hunt through numerous domestic and foreign journals. The magazine would give a ready outlet for legitimate exploiting of honest work and discussion throughout the country. Its pages, moreover, would be valuable in bringing pressure to bear upon governments and municipalities when the Association desired their assistance in its work of preventing or of studying tuberculosis.

It is not necessary to dilate upon the hydra-headed horrors of the great white plague, to physicians generally, and especially to those of Colorado, but it is necessary to warn our local profession that they must not lag behind in assisting the great work.

The directors expect at the annual meeting to form sections so that the many departments of the subject can be studied and discussed to the best advantage. For this reason a large membership will not be a detriment, but a boon to the members.

It seems strange that this great country has delayed the formation of a national society when such have been so long established and have proven their value in the leading countries of Europe. The rea-

sons for this delay have been various, but need not be here discussed. However, the present Society has been started under the happiest auspices and by the best men in the country, so that its creation has been welcomed by our foreign associates, by whom it will be warmly received in a few months at the next International Congress of Tuberculosis in Paris.

The profession in Colorado have a very live concern in the objects of this Association, particularly in the portion of its labors directed towards the cure of tuberculosis. There is no question that high plateaux on the lea side of great mountain ranges afford climates which are of greater value than any other one therapeutic agency, and the more efficiently the hygiene of the patients is carried out, the more evident to the world at large will be our climatic advantages.

Unfortunately at the present time the most complete and extensive systems of hygienic treatment of the consumptive are carried out in lower and inferior climates, but so great is the value of the hygiene that the results of the treatment under unfavorable climatic conditions contrast to the disadvantage of the results we obtain under what is called the open resort methods, which are chiefly practised in Colorado. If we treated our patients as well here we should show far better results. That this is not merely a question of local prejudice, is evidenced by comparison of results reported from sanatoria in Europe at low and high levels. Dr. C. Theodore Williams of London, one of the most eminent authorities on the subject, has drawn attention to this in a recent brochure.

While it is not possible nor best that every patient should be in a sanatorium, yet sanatorium methods should be generally used in the hotels, boarding houses and homes of Colorado. Our laxity in

this respect is frequently commented upon by invalid visitors coming from the East.

Again, with regard to preventive methods such as disinfection of rooms, limitation of expectoration, etc., we are behind the rest of the country in enforcing such rules, though the danger of infection in Colorado is perhaps less than in low and in damp climates, but that it is a very great danger has been demonstrated by statistics collected in the city of Denver.

This country is not resorted to by nearly so many consumptives as it would be if we kept ourselves up with the procession in the scientific treatment and prevention of tuberculosis, instead of lagging behind the rest of the world.

It therefore behooves all those of us who are able, to give our support to this Society in order that we may remove opprobrium from our State and educate ourselves more thoroughly in this subject.

S. E. SOLLY.

A MEDICAL LAW FOR COLORADO.

The proposed law regulating the practice of medicine in Colorado, which is supported by the Committee on Legislation of the Colorado State Medical Society and by the Colorado Medical Legislative League, is printed elsewhere in this number. It was introduced in the House by Speaker Dickson, and in the Senate by Senator Robertson. It must be remembered, however, that this is not the only proposed medical legislation before the Colorado Assembly. At the instance of the Osteopathic Societies there has been introduced by Senator Owen a bill:

"To regulate the practice of osteopathy in the State of Colorado, and to create an osteopathic board, and to provide for the punishment of the violation of this act and to repeal all acts or parts of acts in conflict therewith."

It can easily be understood how the "repeal of all acts or parts of acts in conflict" with a bill to "regulate the practice of osteopathy" and "create an osteopathic board" can destroy any semblance of efficiency that our present laws may have to interfere with the practice of any kind of "pathy" in this State. One of these proposed laws is liable to be enacted by the present session of the Legislature. Which shall it be?

This matter is worthy the careful attention of every physician who appreciates his responsibility as a citizen. He can properly be expected to understand better than his neighbors the importance of having a definite meaning for the terms "practice of medicine" and "doctor of medicine" through which people are guided or misled when they seek treatment or medical advice. He can appreciate the dangers and methods of quackery; and the importance of having a line drawn between the qualified practitioner of medicine, and the ignorant pretender who seeks to clothe himself with the prestige that attaches to the profession. His better acquaintance with the facts makes it the duty of the physician to place them before his fellow citizens, and to exert his influence in favor of wise and effective legislation.

The present state of affairs in Colorado is pretty well exemplified by the history of the Bass case referred to in our January issue. In criticizing the proposed law this should be borne in mind. It should also be borne in mind that in a popular government even the wisest and most upright citizens cannot dictate to the people the laws which to them seem best. The most beneficent legislation secured in any direction, is always the result of some compromise. It is never so good as the best experts could have suggested. If it were otherwise, if the medical profession were permitted to frame for Colorado a

law that they thought would in all respects best protect the interests of the community, it might differ in some respects from the one now under consideration. But before finding fault with this one on account of any specific provision, we would urge consultation with those physicians or lawyers who have given most careful study to this subject of medical legislation. We believe that they will advise no essential change in it. Readiness to find fault with it may indicate ignorance as to what can be done along these lines, rather than any superior appreciation of what it is desirable to do.

One of the chief dangers to such a bill is the introduction of plausible amendments, which, while apparently innocent and intended to improve it, would render the law inoperative, or raise up against it opposition which would secure its defeat. The best that most of us can do to help secure a better medical law for Colorado is to urge our representatives in both branches of the Assembly to support the bill just as it has been introduced, and to oppose all amendments that are not supported by the Committee appointed to represent us.

E. J.

NOTE AND COMMENT.

Dogmatism Out of Place.—The habit of dogmatism, of unconditional assertion and positive, strict directions is an essential qualification for success in the sick room. But it becomes such a fixed habit with the active practitioner, that sometimes he cannot lay it aside even where it is most inappropriate. In discussing matters of legislation where many interests must be consulted, many conflicting views harmonized, and the path of least resistance followed, to attain important practical ends, dogmatism is quite out of place.

The mental attitude which adopts a certain view and absolutely refuses to consider anything else, never accomplishes anything in the halls of legislation, except the defeat of measures that would most nearly effect the ends it has in view. When one attempts merely to set forth his own views, to go upon record, he may be as positive, as extreme, as dogmatic in the expression of them as he pleases. But when he expects a legislature or the people of a State to adopt these views exactly as he chooses to set them forth, he is hopelessly out of touch with the facts of every-day life; and if he cannot readjust the relations of his thought with the world of ideas about him, he can only do harm where he would really like to do good.

Incorporation of the A. M. A.—The bill providing for this is now before Congress. Its purposes and objects are set forth in the report of the Committee. (See *Journal of A. M. A.*, June 11th, 1904, p. 1581.) The need for incorporation has been felt for many years, and probably there is no serious opposition to it. But in the press of business before Congress the best of measures is likely to be crowded aside, unless it is supported by active work on the part of those interested in securing its passage. The bill in question is now in the hands of the judiciary committees. Senator T. M. Patterson from this State is a member of the Senate Committee, and communications addressed to him, and also to the representatives in Congress from Colorado, asking them to push forward House Bill No. 17335 will aid in securing its enactment.

Such communications, however, must be sent promptly. The present session of Congress closes March 4th, and the last days of the session will be crowded with the consideration of measures more sure

to command the interest of representatives and senators.

County Medical Society Reports.—The work of the Secretaries of the different county medical societies in furnishing reports of their proceedings for COLORADO MEDICINE, has reached a state of gratifying efficiency. Inspection of the pages devoted to this department will show that probably every county society in the State which held a meeting last month, is there represented. This is a record that cannot be excelled by the older journals, of the more thoroughly organized and larger State medical societies of the East.

To Fight Tuberculosis.—The struggle against tuberculosis is one that should enlist the strength of the whole community, guided by the medical profession. The method for arousing and directing the popular interest and energy is furnished by the National Association for the Study and Prevention of Tuberculosis. Many physicians in this region will doubtless desire to join in this movement. They should send their names to the Western representative on its Board of Directors, Dr. S. E. Solly of Colorado Springs.

A Debt of Honor.—Some members of the profession may think that there are no expenses connected with the preparation, publication, and advocacy of a medical bill, or that these expenses are gladly provided for by the osteopaths or the newspapers that advertise quacks and patent medicines. Those who have such an impression are mistaken. The writing and printing of letters, circulars, copies of proposed bill, etc., are matters of heavy expense; and this expense has so far fallen on a few enthusiastic workers. The former and present chairmen of the Committee on Legislation, Drs. Van Meter and Catherwood, have thus far had to meet a deficit of over \$200 on account of these absolutely essential and unobjection-

able expenditures. This is a matter that should not be neglected. Either through county societies, or by individual subscription, the actual and necessary expenses of the Committee should be promptly met.

ORIGINAL PAPERS

SOME INTRA-PLEURAL COMPLICATIONS IN PULMONARY TUBERCULOSIS.

By S. G. BONNEY, M. D., Denver.

Fairly close observation of over fifteen hundred cases of pulmonary tuberculosis in private work has demonstrated the frequent association of intra-pleural complications, and their practical influence in determining final results. The object of this paper is to call attention to some of these more important conditions, to suggest briefly a few of their diagnostic considerations, to elaborate their prognostic import and to emphasize their rational management. No attempt is here made to present new features of diagnosis or to introduce innovations of treatment, either in the manner of operation or mechanical appliances.

Non-recognition of the existence of pleuritic complications is occasioned in the majority of instances, not because of any absence of readily available data for this purpose, but through failure to apply the established principles of diagnosis to the evidence presented. In like manner the unfortunate results of treatment frequently are not due so much to the lack of adequate therapeutic measures which could be employed, as to the misconception of their rational scope in individual instances.

It may be said parenthetically, that, unlike many diseases of the lungs, the primary obstacles to success in the management of these complications may not be

ascribed to delayed diagnosis. It is a humiliating reproach to state that not infrequently the interests of the patient would be better subserved if the condition remained entirely unrecognized. The justice of this direct reflection upon the management in the way of occasional meddling and unwarranted surgical interference, will be explained later.

While early diagnosis must be encouraged through actual thorough examinations of the chest and the accurate recognition of physical signs, yet the essential consideration for successful results consists in a correct interpretation of the prognostic significance, and an intelligent appreciation of the rationale of remedial indications.

It should be stated as a preliminary postulate that the existence of pulmonary tuberculosis in an individual very materially modifies the consideration of these surgical methods which may be styled operations of expediency. At the same time the consumptive is entitled by virtue of every instinct of humanity, no matter how hopeless his condition, to the fullest measure of surgical aid in conditions involving so-called operations of necessity.

My conclusions are derived from the mistakes as well as the successes incident to my personal experience. More of real benefit sometimes accrues from the opportunity to witness the deplorable results of mistaken judgment, than from the elated observation of a successful issue following a fortunate, but perchance snap choice, of procedure. In support of views to be presented, perhaps a few selected and illustrative cases should properly be introduced. A more or less comprehensive review of such cases will be permitted in another paper.

The intra-pleural conditions in the course of pulmonary tuberculosis to be considered in this connection are:

1. Pleurisy with serous effusion.

2. Empyema.
3. Pneumo-thorax.
4. Pneumo-pyo-thorax.

PLEURISY WITH EFFUSION.

That this condition is much more frequent than generally supposed is explained largely by the fact that it is often overlooked. Provided an effort is made to conduct a thorough painstaking chest examination, it is difficult to conceive how a moderate or large pleural effusion, presenting such classic physical signs as area of flatness with diminished intensity, or absence of voice or breath sounds conforming to the letter S curve, with dislocation of the organs, can remain unrecognized. That such is occasionally true even in typical cases must be regarded as due to faulty and superficial methods of examination.

It is far more often the small effusion that escapes detection, the area of flatness being confined to the lower posterior portion of the chest, sometimes without extending laterally as far as the posterior axillary line. Both friction rubs and respiratory sounds may be plainly heard in some instances. It is readily seen how such an effusion may be overlooked even by careful and experienced examiners. The only precautions necessary to prevent this mistake consists in percussing to the very base of each lung in the back, and outlining the lower borders of resonance for the sake of comparison.

Small and even moderate effusions have often existed among my cases entirely devoid of such rational symptoms to suggest their presence, as fever, dyspnea, emaciation, malaise or loss of appetite, their recognition being incident only to the course of periodical examinations. It has been interesting to note that material general improvement has often taken place simultaneously with the development of these effusions.

Several years before Murphy pro-

claimed his treatment of tuberculosis through compression of the lung by the introduction of nitrogen gas in the pleural cavity, it had been observed by several, myself included, that lung compression by pleural effusion sometimes produced a salutary effect upon the immediate course of tuberculosis, and that the removal of the effusion by aspiration was occasionally followed by an aggravation of some of the annoying symptoms.

In my experience the fever attending the course of consumption is sometimes, although by no means always, diminished perceptibly after the development of a small effusion. At the same time is manifested perhaps an improvement in cough with marked lessening of the expectoration, absence of previous pleuritic pains and, strangely, a material gain in weight. A removal of the effusion when practised under these conditions several years ago, was occasionally a precursor of an exacerbation of temperature, increase of cough and expectoration, loss of weight and renewed activity of the tubercular process, as shown by the physical signs. This would suggest the positive benefit sometimes derived from the intra-pleural compression of the lung for the time being, and such is my belief.

It should be remembered, however, that this favorable influence of compression does not always obtain even in pleural effusions, that its benefits are usually but temporary, and that no artificial compression either by gas or external contrivances, save in exceptional instances and to fulfil special indications, is to be commended. In other words, it is not the treatment of the tuberculous lung, per se, that should constitute the role of the medical adviser, but rather the management of the tuberculous individual himself.

Laudable as have been the efforts to secure a favorable influence upon the tuberculous process by direct mechanical com-

pression it must be stated that clinical results have not been particularly gratifying. Experience has shown that in uncomplicated cases it is rather the dilatation of the air cells and the other physiological changes incident to moderate altitudes that constitutes the desideratum, rather than compression of the lung.

It is no detracting from the genius of Murphy to allude to the frequent impracticability of his method, and to disparage its adoption for general purposes. It does remain, however, for the practitioner to take cognizance of the practical truth emphasized by his work to the effect that an idiopathic compression from serous effusion may be of distinct value in some cases. The practical lesson relates to whether or not there exists special indication for its removal.

Irrespective of the duration and sometimes of the extent of the effusion it is my custom not to resort to aspiration in the absence of fever and dyspnea or of such a degree of mechanical compression as threatens subsequently to seriously embarrass cardiac and respiratory functions. If these conditions exist, however, removal of the liquid becomes imperative and should brook of no delay, regardless of all other considerations. The presence of fever in itself without reference to other rational symptoms or physical signs, does not afford a distinct and reliable indication either for or against aspiration. In conjunction with other clinical facts it may furnish a valuable and sufficient justification for its employment.

It is not my practice, as has been advocated by some, to delay aspiration until fever has ceased, on the ground that the rise of temperature indicates a continuance of inflammatory action, and that with this there must ensue a recurrence of the effusion. If such indications as relate to the pulse and respiration are perfectly clear, aspiration is employed re-

gardless of fever. On the other hand, a persisting fever not previously present, attending a moderate effusion without other clinical manifestations, suggests the expediency of operation. Without the exhibition of such clearly defined data there is no excuse for resorting to the aspirating needle even to the extent of an exploratory puncture.

Those who regard as a myth the danger of converting a serous effusion into a purulent one by the introduction of the needle, have certainly been most fortunate in their technique or have had but little experience. Permit me to state most emphatically that several times in my experience after a scrupulous disinfection of skin and hands the introduction of an irreplaceable needle has been sufficient to convey an infection into the pleural cavity with the distressing sequelæ attending an empyema.

The use of the exploratory needle for diagnostic purposes purely, is entirely without any justification whatever in these cases. Given a case of pleural effusion of any nature and extent with any combination of rational symptoms, if the indications for its removal be sufficiently clear, let ordinary aspiration be employed. With the additional information secured through the gross appearance and the bacteriological examination of the exudate, a subsequent course of procedure can be safely and intelligently conducted. If, however, the indications are not sufficiently clear, on the merits of the clinical symptoms, to demand removal, why indulge in meddlesome and dangerous interference simply for the purpose of diagnosis, which for the moment is relatively unimportant?

Contrary to the opinion entertained by some that the character of the treatment is directly dependent upon the nature of the effusion, and hence the desirability of determining early its precise nature, let it

be asserted that among consumptives the question of entering the pleural cavity in any way should be decided purely as previously stated, upon the combination of symptoms and physical signs. In all such cases these should furnish sufficient data to constitute a safe and satisfying working basis without recourse to that refinement of diagnosis which exalts the findings of the laboratory and the autopsy, at the expense of the patient himself.

In the event that the clinical manifestations warrant the performance of aspiration, or assuming that the pleural cavity has already been entered, it is readily conceded that the future course is subject to some extent to the character of the effusion, although not entirely so, as will be subsequently shown. The present contention is simply that among pulmonary invalids the precise determination of the nature of the liquid, whether serous or purulent, is entirely unnecessary as regards a future course of action in view of the guidance and direction afforded by other means.

The employment of the exploratory puncture for diagnostic purposes solely, is therefore condemned. Not until the development of urgent or dangerous symptoms is it necessary to establish such a diagnosis as to involve or justify surgical measures.

Ordinary aspiration, when once practised in accordance with authorized principles, should be repeated at intervals as long as the previous condition remains in force, and suspended whenever these conditions cease to exist. If the effusion is found at once to be purulent or later becomes so, the discussion should be more properly embraced under the ensuing head, empyema.

EMPYEMA.

Ten years ago, in 1894, in a paper entitled, "Methods of Treatment of Empy-

ema," read before this Society, it was my privilege to study and review the various measures (as advocated by men of authority), to compare their relative advantages and disadvantages, and to note the peculiar conditions in which each was applicable or contra-indicated.

At that time it was the general dictum of the medical profession, that the treatment of all cases of empyema should be that of surgical interference, the only difference of opinion relating to the presence of pus, which demanded prompt evacuation and drainage. If the condition of the patient in far advanced phthisis was desperate, it was thought more merciful to permit him to die without inflicting the added torture of an operation.

In the light of a considerable experience, which has been educative if sad, it has become apparent to me that the above course is directly and radically wrong. Observation of numerous cases bear out what might be regarded as an assumption. Some of these cases will be reported at length in a future paper to sustain the position taken, and illustrate the perilous responsibility assumed in advocating the radical operation for those comparatively well, and in withholding such surgical aid from those in urgent need, though apparently beyond hope.

The radical operation is necessarily followed either by a sudden expansion of the previously compressed lung, which affords opportunity for renewed activity of the tubercular process, and usually results in very quick softening and cavity formation, or is attended by failure of the lung to expand and obliterate the pleural cavity, which means long-continued pus formation and great danger of amyloid change.

In the absence of such clinical indications as fever, sweats and chills, it seems exceedingly ill-considered, not to say foolhardy, to precipitate the patient into the

midst of such peril. To witness the spectacle of a rapidly progressive or even long continued decline, with a fatal termination, in one who before operation was well nourished, devoid of fever, and to outward appearances in good condition; and to observe the astonishing recovery from an empyema in one who was at first refused operation by a surgeon as being already moribund, and to be privileged to note his condition improve through a period of two years to a complete arrest of the underlying tubercular process and to a permanent resumption of earning capacity, is sufficient to shake the faith in the tenability and wisdom of the previously accepted principles pertaining to a course of treatment to be accorded pulmonary invalids.

My present custom in the empyema of consumptives, particularly if not too far advanced, is to let it alone unless there is some good and sufficient cause for interference along the lines previously suggested. If removal is indicated, simple aspiration is first employed and repeated as frequently as demanded. If even temporary improvement does not attend such a measure, recourse should be had to the syphon drainage of Bulau, as was adopted and reported by Dr. Whitney a year ago. If for any reason the drainage is imperfect and the clinical results not of a satisfying nature, then, and not until then, is it justifiable to resort to the radical measures of opening the pleural cavity, with or without rib resection, in consumptives. The only exception to this relates to thoroughly septic cases with perhaps chills, fever, sweats, great prostration, with an advanced underlying tubercular infection, and preferably with the empyema well circumscribed. Under such conditions no time should be lost through temporizing measures in securing free opening and thorough drainage.

It is unnecessary to describe in detail the distinctly surgical procedure of pleurotomy. It may be permissible, however, to call attention to one or two features that have repeatedly impressed me as of great importance. First, the opening should not be too low, on account of being later closed by the rising diaphragm as the cavity begins to become obliterated. The pus is not emptied from the thorax altogether through the force of gravity, but is pumped out to a large extent by the action of the lung in inspiration and expiration. Secondly, the opening should be maintained sufficiently patulous to permit free drainage. This does not refer strictly to the opening in the chest wall, but to the tubes as well. I have frequently seen the fenestrated tubes so often used completely obliterated by the growth of granulation tissue from the opposite sides of the wall when the tube has been kept in position for some time. Third, the tube should be removed daily and cleansed and shortened from time to time, in order to avoid the violent paroxysms of coughing produced by irritation of the opposing and approaching pleura. Fourth, after daily removal of the tube the patient should not merely be turned over on the side but should also be subjected to a short series of pulmonary gymnastics in various positions, first with head and shoulders of affected side almost touching the floor with the hips elevated on the side of the bed. Subsequently the hips should be lowered carefully to the floor with the shoulders elevated. This permits the fullest possible drainage from sacculated pouches that are not emptied by the ordinary turning of the patient. I have seen this demonstrated on my own patients very many times after the cavity was supposed to be emptied. Gentle coughing is often sufficient at such a time to either violently expel large masses of

flocculent coaguli or at least cause them to present at the opening, and allow their subsequent removal by the forceps.

PNEUMO-THORAX.

The discussion of this somewhat frequent complication of consumption should include properly a separate consideration of the cases of acute onset, and the open, closed and valvular varieties. No mention will be made here of those cases with air and liquid combined in the pleural cavity.

The diagnosis of acute pneumo-thorax, simple as it would appear, and with such cardinal clinical features as sudden onset, following a severe attack of coughing, pain in the side, collapse, cyanosis, exceedingly marked dyspnea or orthopnea, mental agony and the familiar air hunger, to say nothing of such classic physical signs as tympanic resonance, absence of voice or breath sounds, impaired mobility of affected side and dislocation of organs, is nevertheless very frequently overlooked.

It has been my privilege to see several such cases in consultation, the nature of which had not been recognized, although hysteria and various cardiac and circulatory disturbances had been suspected. In the majority of cases that have come under my observation the pulse has been exceedingly good, usually slow and of good quality, and the heart sounds on superficial examination normal, suggesting at once that the difficulty is not cardiac in character.

A painstaking examination of the chest, which means its complete exploration, utilizing both auscultation and percussion, is always sufficient to establish a diagnosis. The real inability to do this usually results from failure to make such an examination, which is sometimes difficult on account of the desperate condition of the patient, or from lack of a correct appreciation of the physical signs to be obtained.

It seems to be often imagined that pneumo-thorax should invariably exhibit such typical text-book signs as bulging of rib space, complete immobility of side, resounding tympany, amphoric or cavernous respiration with possibly metallic tinkling, and should be ushered in by sudden severe pain following cough or violent exertion. As a matter of fact there have occurred among my patients numerous instances of acute pneumo-thorax without any assignable cause whatever, and many others of partial pneumo-thorax without so much as an initial symptom to suggest examination. Bulging of the rib spaces is by no means constant, nor any very marked immobility of the affected side, although both may be expected in severe cases. A perfectly defined tympany on percussion, so often looked for, is seldom observed. Amphoric or cavernous respiration can exist only in case of an open pneumo-thorax with air passing freely in and out with each respiration through an open communication with a bronchial tube. Metallic tinkling occurs only in case of liquid, as well as air, being present in the pleural cavity.

In the absence of a suggestive history and the above physical signs, the diagnosis should be made by the diminished intensity of breath and voice sounds, complete absence of dullness and possibly displacement of heart. It may be noteworthy to mention in passing that I have seen one case in which the heart, instead of being pushed in the opposite direction, was found drawn toward the affected side by virtue of previously existing fibroid contracting change, and one case in which there was complete flatness over the affected side, suggesting pleural effusion, and in fact occasioning an error in diagnosis, as shown when effort was made to remove the liquid. This flatness was undoubtedly caused by the very great degree of hyperdistension. Two other phy-

sicians seeing the case with me concurred in the diagnosis of large pleural effusion.

The prognosis of these acute cases must be regarded, first, from the standpoint of the immediate present, and, secondly, in case of a not quickly fatal result, from the basis of its chronic existence. It has been frequently observed by others as well as myself that cases surviving the first few hours and possibly day or two may linger for several years, according to the extent of their original tubercular infection and subsequent management.

In cases of open pneumo-thorax the indications for treatment consist solely in excessive stimulation for a few hours. In urgent cases, while stimulation is of course plainly indicated, the only relief that has been in any way satisfying to the patient, the family or myself has resulted from aspiration of the air. This is only applicable to cases of the valvular type permitting the ingress of air with each inspiration but preventing its exit upon expiration, and occasioning a positive hyperdistension in the pleural cavity.

Most remarkable subjective and objective relief following the aspiration is immediately noticed. This is almost instantaneous with the first withdrawal of air. The relief is but temporary, possibly of but a few hours duration, and can only be secured again by a repetition of the aspiration. Two cases recently seen by me were repeatedly aspirated with marked improvement following each aspiration, but a relapse occurred. Finally a trocar and canula were inserted in each instance, the canula being left in place. This procedure was instrumental in securing some relief from the distressing symptoms, and was attended with a marked egress of air from the chest, but in neither instance prolonging the life of the patient over a few days.

It is, however, the treatment *par excellence* for such cases, and provided there

is not already too much impairment of respiratory capacity of the lung of the other side through extensive tubercular infection, will occasionally enable the patient to adapt himself to his radically changed respiratory conditions. Pending this happy accomplishment, free inhalations of oxygen are of immediate value as well as in the acute cases of the open variety.

The existence of closed pneumo-thorax implies the previous occurrence of a ruptured pleura, either of sudden onset or associated with a gradual development, which tear has subsequently healed and effectually closed the opening. It is frequently impossible to distinguish this from the valvular variety save that in the latter the symptoms are more urgent, the suffering more intense, and the danger more imminent. There is also usually less immobility of the side and less bulging. Of course in such a case there would be great diminution or absence of respiratory sounds on auscultation.

The prognostic influence of this type of pneumo-thorax upon pulmonary tuberculosis, if unassociated with liquid, is not necessarily unfavorable; in truth actual benefit may result from the compression. The danger lies in the opportunity afforded for infection and inflammatory action through the extrance of micro-organisms before healing of the rupture takes place, producing the formation of pus and converting the condition into pneumo-thorax. Before this transformation takes place the treatment of the chronic pneumo-thorax consists in letting it alone.

PNEUMO-PYO-THORAX.

Save from a thorough and comprehensive chest examination this complication is very likely to be unrecognized. The condition is a chronic process and often is lacking in rational symptoms to suggest its presence; although in case of a remaining open communication with a bronchus, close inquiry will elicit the peri-

odical expectoration of large quantities of sputum, especially in the morning or upon change of position, as leaning over or turning upon the affected side in bed.

While upon examination the presence of air may be detected, the existence of the liquid is not infrequently overlooked if occurring in only moderate amount. This is due partly to the fact that the liquid remains low in the pleural cavity and is not moulded around the lung as in the case of a pleural effusion. In pneumo-pyo-thorax the upper level of the liquid conforms strictly to a horizontal plane, and being contained at the extreme base of the pleural cavity, may readily escape notice if a searching examination be not made at this point. If attention is paid to this there should be no difficulty in recognizing the fluid on percussion, particularly in comparing the lower borders of percussion resonance on the two sides. This is made still easier by the usual development of emphysema on the well side, still further lowering its limit of resonance.

A most striking corroborative physical sign is a very marked change in the level of flatness under the liquid, with a corresponding change in the position of the patient. This, with the readily obtainable splashing sound and often the metallic tinkling, renders the diagnosis extremely easy when looked for.

The prognosis, aside from such considerations as the hyperdistension previously mentioned in cases of simple pneumo-thorax, is to a great degree dependent upon the degree of sepsis existing, if any.

The treatment of pneumo-pyo-thorax, in the absence of marked intra-thoracic distension occasioning cardiac or respiratory embarrassment, or of such a degree of sepsis as to produce fever, chills and sweating, consists in doing nothing as far as the complication is concerned, or at the most resorting to an occasional aspiration

if indicated. If further measures are demanded by the existence of urgent symptoms, the syphon drainage, as used to meet somewhat similar indications in empyema, is the rational plan to be adopted. If, unfortunately, this expedient is found impracticable or insufficient and the condition progressively becomes more alarming, recourse must be had to an operation which, to this class of cases, is most serious of all, the permanent opening of the pleural cavity.

From my observation it would seem that for these unfortunates the old saying of Dante should be changed to, "Abandon hope all ye who are entered here". The atelectactic lung thoroughly collapsed is usually bound down by firm adhesions precluding all prospect of its ever expanding to any extent. And now begins the long period of interminable suppuration and drainage, the cheerful prospect of repeated rib resections, an Estlander or a Schede, non-healing wounds and finally amyloid change to end the ever deferred hope. And still perhaps a few years of this is preferable to an earlier death, and surely affords a justification for the operation if the exigency exists.

*PLEURISY WITH EFFUSION AND
EMPYEMA. IMPORTANCE OF
EARLY DIAGNOSIS AND
TREATMENT, FROM
STANDPOINT OF
INTERNIST.*

By JAMES RAE ARNEILL, M. D., Denver.

It is the experience of every physician of large opportunity in the examination of patients with diseases of the chest, to frequently encounter collections of fluid in the pleural cavity, either serous or purulent, in cases which were diagnosed tuberculosis of the lungs, chronic malaria, unresolved pneumonia, typhoid fever, and a host of other diseases.

During the past ten years, more especially during the past seven, a very large number of cases of pleurisy with effusion and empyema have been examined by the writer. The majority of these cases had been sick for periods ranging from weeks to months and even years. Most of the cases were seen in hospital or consultation work, and had been under the care of other physicians. They furnished very instructive lessons, emphasizing with peculiar force the great importance of very careful physical examinations in general practice. One was impressed with the fact that symptomatology alone is a poor guide to put one's faith in for diagnostic purposes.

Unfortunately the art of accurate physical diagnosis is very much neglected in the ordinary routine of practice, the diagnosis being made largely from the complaints of the patient. We are frequently told that the doctor made the diagnosis of the case without the removal of any of the clothing, the patient being convinced that one is a poor sort of diagnostician who requires the removal of clothing.

In many of the cases it seemed that the only excuse for the failure to make a diagnosis was either the neglect of a careful percussion and auscultation of the chest, or more especially a timidity about the use of the exploratory puncture. A common mistake of many practitioners in patients confined to the bed, is to examine the front of the chest, and if nothing is found, to omit the examination of the back.

As a matter of fact (excepting cases of pulmonary tuberculosis) the back, below the angles of the scapulæ, is a veritable Eldorado for rich findings. The frequency of pleuritic exudates is something startling. They are very common and important complications of valvular diseases of the heart, myocarditis and arterio-

sclerosis, during the stages of in-compensation. The various forms of Bright's disease often have hydrothorax or wet pleurisy associated with them. Rheumatism is frequently complicated by inflammatory conditions of the pleural and pericardial sacs. Tuberculosis of the lungs is occasionally accompanied by large effusions. Primary tuberculosis of the pleura, with effusion, is generally recognized by the profession as extremely common. All cases of lobar or bronchopneumonia, with their numerous forms of micro-organisms, must be looked upon with suspicion, as possible causal agents in the development of an empyema or pleurisy. Traumatism must also be recognized as an occasional cause. Thoracic new growths are not rarely attended by an effusion.

The great importance of an early diagnosis of pleurisy and more especially of empyema cannot be overstated. A large collection of fluid in the chest, existing for some time, means that the lung has been thrown out of function, pressed into a small space high up against the spine, and will return to its original volume and functional activity with great difficulty or not at all. It means that the heart and other viscera have been crowded out of position and have possibly been anchored in their abnormal positions by adhesions. It means a marked impairment of the patient's health. It means permanent changes in the pleural membranes. In the case of a purulent effusion it means a prolonged surgical case with great deformity of the chest and spine and displacement of organs; possibly amyloid degeneration, sepsis, permanent impairment of health and in many cases death. Early diagnosis and proper treatment of pleurisy with effusion, and non-tuberculous empyema means more or less prompt recovery and no disability, in the majority of cases.

CASES ILLUSTRATING MISTAKEN DIAGNOSIS.

CASE No. 1. In the spring of 1900 a Japanese student was sent to the medical clinic of the University of Michigan, with a diagnosis of typhoid fever. For a number of days he had suffered with malaise, loss of appetite and fever, but had not the slightest cough or pain in the chest, and did not complain of shortness of breath. A routine physical examination revealed the fact that the pleural cavity was most likely filled with fluid. This was proven by exploratory puncture. A large quantity of fluid was withdrawn by means of the Potain aspirator on two occasions.

CASE No. 2. A young man of about 20 was sent to the hospital with the diagnosis of advanced pulmonary tuberculosis, with only a few months to live. He was expectorating a large quantity of purulent, foul-smelling material, had irregular fever, sweats and had lost about 30 pounds in weight. Sputum examination showed the absence of both tubercle bacilli and elastic tissue. Percussion revealed a large area of absolute dullness in the back, extending high up. Exploratory puncture demonstrated the presence of pus. The patient was immediately operated upon by Dr. Nancrede, sections of several ribs being removed. The expectoration of purulent material immediately ceased, showing that it was either being absorbed from the pleural cavity or that there was an opening into a bronchus. Recovery was prompt.

CASE No. 3. A middle-aged man of tuberculous appearance who had been sick for several months, following an attack of grip, and complaining of profuse purulent expectoration, irregular temperature, weakness, shortness of breath and loss of weight, was sent to the medical clinic as a case of unresolved pneumonia. He pre-

sented the familiar signs of effusion in his back; exploratory puncture revealed pus. Operation and recovery followed. A year later, however, I was informed that he developed the same trouble on the other side.

CASE No. 4. A supposedly advanced case of pulmonary tuberculosis showed marked flatness in the right back and axilla, with practically absent breath and voice sounds, and tactile fremitus. Exploratory puncture showed serous effusion, and about one litre of fluid was drawn off.

Pleural effusion and empyema often go unrecognized in cases of pulmonary tuberculosis, as the signs are supposed to be due to an extension of the tuberculous process in the lungs. Examples might be multiplied many times, illustrating the frequency of mistaken diagnosis in these cases. A detailed discussion of the various well-known text book signs of fluid in the chest cavity, would have the effect of a twice-told tale. However, a statement of the writer's experience with the various signs in a large number of cases might prove of some interest and value.

Litten's phenomenon is an interesting sign, but is not at all diagnostic of effusion, as it can be obtained just as well in pneumonia, chronic adhesive pleurisy, new growths, etc. It simply means that there is not an unfolding of the diaphragm during deep breathing.

The bulging of the intercostal spaces is a sign of very minor importance, as considerable fluid may be present where there is no bulging, and one should use the exploratory puncture in doubtful cases, even with retraction of interspaces.

Absolute dullness or flatness is not an essential sign, as I have frequently demonstrated fluid in fairly large quantities,

where there was simply a dullness or diminished resonance.

The absence or marked diminution in breath sounds is not an essential sign, as one frequently finds a fairly strong, high pitched or distant blowing breathing. This is particularly true in children.

Bacelli's sign is a delusion and a snare and not at all to be relied upon. He states that whispered pectoriloquy is usually not heard in purulent exudates while it is in serous effusions; also that in purulent effusions the fremitus produced by the whispering voice is not transmitted to the hand laid over the effusion, whereas in serous effusions such vibrations are transmitted. I have been able to demonstrate the falsity of these statements on several occasions, as striking tactile fremitus and whispered pectoriloquy were noted, and the exploratory puncture immediately demonstrated pus. This is particularly true in children, and many times in adults.

The absence of a movable line of dullness is very slight evidence against fluid. A large number of cases do not show a movable line of dullness, even though not encapsulated. It is a waste of time for the busy general practitioner to attempt to demonstrate Ellis' S shaped line. It represents the upper line of dullness in only a limited number of cases of pleuritic exudate. For the chest specialist it may be of value in differentiating between pneumonia and effusion.

The displacement of the heart and liver is a valuable sign, but very frequently in right sided effusions large enough to make aspiration advisable there is very slight displacement of the heart and no demonstrable displacement of the liver.

The leucocyte count is of almost no value in distinguishing between a purulent and a serous effusion. On several occasions I have stated to my classes that ac-

cording to the leucocyte count in certain cases, we would expect a serous effusion, but have immediately demonstrated a purulent one.

The conclusion to be drawn from these statements is this: When you have the slightest doubt about your diagnosis, if there is dullness in the back below the angle of the scapula, or in the axilla, make an exploratory puncture. If you do not succeed the first time select a new site and explore a second time, a third time, and even a fourth time, with a larger needle if necessary. If you have reasonable grounds for suspecting a purulent effusion, persist in your exploration until your diagnostic conscience is satisfied, as your patient's life may depend on your success or failure. The value of exploratory puncture, efficiently done, in chest cases and in certain other fields of diagnosis, can not be over-estimated.

Method. A fairly large, long needle attached to a glass syringe by a short flexible non-collapsible piece of rubber tubing, is the best apparatus for this purpose. In one case of a slender woman I was able to demonstrate a serous effusion with a small hypodermic needle and syringe. In several other cases, however, I failed, where a larger, longer needle demonstrated fluid. In most cases small needles will lead one into grave error, so shun them. The short needle of small calibre either does not reach the fluid or its lumen is plugged with flocculi of lymph. Local anesthesia with cocaine or Schleich's mixture may be used for this first puncture. Freezing with ethyl chloride or a piece of ice and salt is useful. It is not always possible to hug the upper border of the rib because of fear of wounding the intercostal artery; in many cases the ribs will be so close together that you will find it difficult to work your way between them. Locate the chosen interspace with the index finger of the left hand, press in firmly

and plunge the needle straight in, along the edge of the finger nail, if possible close to the upper border of the rib.

Palpatory Puncture. The educated hand learns much by the use of the needle. Sensations are conveyed to it as the needle enters, telling whether it is penetrating a thickened pleura, lung tissue, or whether it is in a cavity or not. Suction must be made as the needle penetrates different levels, as one may obtain fluid at varying depths. Again the needle may have penetrated the layer of fluid, so suction must be made as the needle is gradually withdrawn.

I recall a number of cases in which puncture was necessary, before demonstrating pus. A member of the University of Michigan football team suffered a fracture of several ribs in a class rush. A few weeks later he became ill with irregular temperature and slight cough. His physician suspected empyema, explored his chest twice with needles, but with negative results. Because of this fact the case dragged on without a diagnosis and was finally sent to the hospital, where I made three explorations, in different locations, before demonstrating a thick pus. Resection of ribs was immediately done by Dr. Nancrede. His recovery was prolonged into months; many times he was septic and his life was despaired of. The prolonged misery and great deformity of the chest in this case can be laid at the door of too few exploratory punctures made with small needles. It was the fifth exploratory puncture which was most instrumental in saving this athlete's life.

Safety of the Exploratory Puncture. When correctly performed under rigid rules of cleanliness of the patient and instruments, the danger is practically nil. It goes without saying that it is essential that an area of flatness or impaired

resonance should have been determined by percussion. Even the novice at this work runs very little chance of doing harm. To illustrate: During the Michigan summer season of 1903 some 28 or 30 of my inexperienced junior and senior students performed exploratory puncture of the pleural cavity or spinal canal and aspiration of the pleural cavity, without the slightest suggestion of infection or hemorrhage or injury to the lung.

I have seen moderate sized hematomas form under the skin. A professor of medicine has told me that he once punctured the lung and produced a pneumothorax. A report has come to me of a former Denver physician of ill repute having caused the death of a patient as a result of severing an intercostal artery in the operation of thoracentesis. In a very large number of exploratory punctures of the pleural cavity, spinal canal and peritoneal cavity and paracenteses of the pleural and peritoneal cavities performed either by myself or my students, I have never seen any unfortunate results. Occasionally a chest case would come near fainting. Rarely in an ascites case the trocar wound would not heal promptly or might develop a slight infection because of the persistent leaking after operation.

A study of the bacteriology of the effusion throws great light upon the treatment and prognosis. If the fluid is sterile it is most likely tuberculous. If the pneumococcus is the cause of the empyema the prognosis is favorable and a cure may result from a simple aspiration. If streptococci or tubercle bacilli are found, the prognosis is less favorable and radical operation is necessary.

Treatment. Many small effusions are absorbed without medication. I have used sodium salicylate in fairly large doses in some cases and thought that it hastened the absorption. An exudate

which does not show a tendency to become absorbed in two or three weeks, or which is large and interferes with intra-thoracic pressure (greatly displacing the heart), especially in children, should be aspirated. Sometimes one aspiration is sufficient. Occasionally several are necessary. Rarely they do not suffice because of the rapid and persistent accumulation of fluid, and drainage is required. Many cases of empyema, if diagnosed early, do not require resection of the ribs. I have seen cases recover promptly with simple incision in the intercostal spaces and the introduction of good drainage (catheters), without irrigation. This is especially true of pneumococcus infections.

Case of Sterile Empyema cured by repeated aspirations. A patient with an enormous collection of a *sterile, purulent* fluid in the right pleural cavity was under my care at the University of Michigan hospital from May 5, 1903, to August 1, 1903. Associated with the empyema was a mitral insufficiency. The young man was almost "in extremis" on entering the hospital. He had been sick for three years. The apex beat was in the left mid-axillary line. The entire right chest was filled with fluid from apex to base, with great displacement of the liver and heart. Because of his extremely serious condition due to increased intra-thoracic pressure and displaced heart, I decided that it would be better to aspirate a small amount of fluid on several different occasions in order that his heart might gradually become accustomed to the change in its position and the altered intra-thoracic pressure, rather than refer him to the surgeon for resection. (The effusion in his case was sterile and there was no reaction to tuberculin.) During the first aspiration of 500 c.c. he nearly collapsed. The patient

remained during my summer session, and from the time of his entrance to his dismissal 12 weeks later, he was explored and then aspirated on 11 separate occasions, chiefly by a different student or interne each time. The quantity of fluid obtained varied from 500 c.c. at the first aspiration to 1,500 c.c. at the sixth aspiration, and a few c.c. at the last aspiration. The total quantity removed was about 8,650 c.c. A letter from the patient during the past winter stated that he felt perfectly well except for an occasional slight trouble with his heart, and that he was working hard at all kinds of labor.

Discussion.

Dr. Denison expressed his great interest in Dr. Arneill's paper and added an account of an unfavorable experience of his own which confirmed Dr. Sewall's statement that exploratory aspiration of the chest is not without danger in certain cases under certain conditions, as when an abscess cavity in the lung is connected with a large bronchus, with or without a further opening into the pleural cavity, or an ulcerated state of a portion of lung is associated with an empyema; so that the contents of such abscess or empyemic cavity can be aspirated toward and into a main bronchus. Dr. Denison believed that such aspiration is possible. It might explain the fatal result just mentioned, and he believed does explain the accident he had several years ago when a patient—an advanced, phthisical case with empyema—expired soon after the aspiration needle was introduced; the unfortunate man seemed to be drowned, so to speak, in the purulent matter drawn inward by a deep inspiration preceding a spasmodic effort at coughing. Pus came out of his mouth and air was sucked in through the needle. During such forcible inspiration a vacuum state may be caused inside an abscess or the pleural cavity and the contents of either may be aspirated inwards. If the conditions are such that the expansion of the lungs is resisted during inspiration he could conceive of the possibility, if the lung periphery were adherent to the chest wall, of the contents of cavities, pleural or pulmonary, being drawn inward. In performing resection on animals, as Ewald

did on dogs, when a large opening in the chest wall is made the lung will collapse and not return again except that opening be closed. This closing has been done with a glass window so that the slow process of expansion of the lung could be watched. But he believed that in such complicated cases we have to reckon with the possibility of the equivalent of a collapse of the lung on aspiration of the chest.

The pressure of the air within the thorax is less during inspiration than during expiration. And if that inspiratory effort is greatly exaggerated at a particular time during the operation, the result may be disastrous.

Speaking of the collapse of a lung compressed by an empyema, Dr. Denison said he had, this past week, an opportunity of examining a young lady, now 21 years old, who 11 years ago had been referred to him by St. Louis surgeons who had performed resection on her when 10 years old for a long standing empyema. In fact, the operation had been too long delayed, so that the compressed lung remained completely collapsed. The doctors had sent her with her parents to Colorado hoping the light air would expand the lung into place. Two ribs had been resected and the resulting opening was large enough so that the collapsed lung and heart movements could be seen through it. The resort to the high altitude was without effect in distending the collapsed lung. There may possibly have been adhesions of the collapsed lung, but there was no proof of it. But Dr. Denison thought to increase the intra-pulmonary pressure by using the In-and-Exhaler, which was faithfully practiced by the little girl long after she returned to her home in St. Louis. In less than six months the father wrote that not only had the lung come out and filled the thorax, but the opening had filled over and the child was well.

Now it is very gratifying to see the young woman in robust health, symmetrical as to the two sides of her chest, the respiratory sounds heard with the stethoscope showing that the left lung fills even below the point of the operation for resection. Here is a good illustration of the fact which should always be kept in mind, in operating within the thorax, namely, that we must account for and reckon with an intra-pulmonary air pressure state varying with inspiration and expiration.

REPORT OF A CASE OF PERNICIOUS ANEMIA.

By O. M. GILBERT, M. D., Boulder.

Mrs. M., aged 19, white, married one and one-half years, came under my care on July 23, 1903, with the following history:

Family and previous history uneventful. Patient gave birth to a healthy male child on March 8, 1903. During pregnancy she was ordinarily well except for considerable vomiting during the first three or four months. Labor was normal and not unusually hard for a primipara, being in labor only about eight hours. Hemorrhage at the time was said not to have been excessive, and the puerperium was a febrile and otherwise uneventful, except she felt that she did not seem to gain strength as expected. Nothing, however, was thought of this until six weeks after confinement, when she visited a relative who commented upon her extreme pallor, and she admitted an extreme weakness and shortness of breath. Not, however, until two or three weeks later did these symptoms, with the addition of nervousness, headache and anorexia, become of sufficient severity to cause her to seek medical aid.

When she came to me two months later, this being about four months after confinement, the following conditions presented themselves: Fair state of preservation—in fact, only slightly below her normal in weight. A very striking pallor, particularly of the mucous membranes, there being the characteristic lemon tinge and the pearly sclerotics. Dyspnoea and palpitation, especially upon slight exertion. Pulse 107 to 120 and very soft and compressible. Temperature $100\frac{1}{2}^{\circ}$. Vertex headache severe. Nervous irritability marked, decided languor and indisposition to physical or mental activity. Nausea and anorexia often present. Loud soft

hemic murmur over base of heart and transmitted distinctly into the large vessels. Feet and ankles decidedly edematous. Surface at times inclined to be cold and clammy. The pupils were not especially large and reacted well. There were no visual disturbances except when syncope threatened, when there was of course a tendency to blurred vision or even blindness. The lungs were normal and the heart, in addition to the hemic murmur referred to, gave a large diffuse systolic impulse. It was not perceptibly enlarged. The tongue was dry and glazed, but not much coated. There was generally constipation, but occasionally diarrhoea. The liver was but slightly if at all, enlarged. The spleen was just palpable. The urine was dark and of rather high specific gravity, but otherwise normal.

She was still nursing her previously healthy child, but he was beginning to show the effect of his poor bill of fare. He was immediately taken from the breast, after which he did well. She was taking full doses of bromides for the nervous irritability and acetanilid for the headache, which of course were not making hemoglobin very fast. The patient was still struggling to keep up for fear she would be sick if she went to bed.

The blood examination revealed the following: Hemoglobin, 12%; red blood corpuscles, 800,000 per cubic millimeter, giving a color index of somewhat below one; a marked poikilocytosis, and nucleated red blood corpuscles, both of the megaloblastic and normoblastic type, were present—the former being relatively quite numerous, the latter scarce. No differential or absolute leucocyte counts were made, but the small mono-nuclears were evidently increased relatively. There was no apparent leucocytosis.

The patient was put to bed and given an abundance of light, but nutritious diet; raw eggs, milk, and rare meats forming

a goodly part of it. She was also given liquor kali arsenitis and Blaud's mass. She tolerated the former quite well up to about twenty drops three times daily. Blaud's mass was given from twenty to thirty grains per day without any evidence of disturbance of the stomach.

In five weeks the hemoglobin had increased to thirty-two per cent. Unfortunately the count at this time was a failure on account of faulty technique. The normoblasts were decidedly increased and the megaloblasts decidedly decreased. The clinical and physical symptoms and signs showed a marked improvement in every direction, and the patient was beginning to sit up, when without warning and while sitting up, she grasped her throat and gasped violently for air. This lasted about a minute, according to a witness, after which she slowly recovered to the extent of saying that she could not get her breath and asking for water.

Another paroxysm followed about two minutes later, during which she seemed to lose consciousness for a moment, but recovered sufficiently to say, "I can't stand another like that". About eight or ten minutes later another paroxysm came on similar to the last, the patient sinking into unconsciousness and dying. There were no convulsions, simply apparent struggling for air.

I was unfortunately unable to obtain permission for an autopsy. Now the question arises, what was the immediate cause of death? Had there been any previous evidence of phlebitis of a large vein I would have thought that a large thrombus had been dislodged, and after making its way to the right side of the heart, had passed the tricuspid and pulmonary valves and lodged at the bifurcation of the pulmonary artery or one of the large subdivisions and thereby caused death. But there had been no such evidence of inflammation in any of the veins.

Although it is recognizedly common to have numerous small thrombi or emboli and sometimes consequent hemorrhages in the brain, lungs or other viscera in pernicious anemia, so far as I am able to find, it is not common to have one large enough to cause sudden death by obstruction of a pulmonary artery, and I do not think that the symptoms given could be caused by cerebral embolus, although death from this cause is not at all uncommon in grave anemias of any kind. Furthermore, these generally occur somewhere near the height of the anemia, and not after improvement has taken place to this extent.

In traumatic or puerperal hemorrhages it is not uncommon, however, to have death occur as a result of cerebral thrombosis or embolism after the hemorrhage has entirely ceased and improvement has taken place to the extent of consciousness, and a fair state of circulation has been re-established.

This, it seems, may also occur without any demonstrable lesion other than a cerebral ischemia. The pathology of this condition is certainly somewhat obscure, as is the pathology of this case to me.

Another question arises, Is this case, having its incipency as it did during pregnancy or the puerperium or immediately following the latter, one of true idiopathic or progressive pernicious anemia?

It seems that some authorities attempt to exclude these cases as having a demonstrable cause, but the mere fact of its occurrence coincidentally with pregnancy, parturition or the puerperium is not sufficient to explain its cause, unless there have been a grave postpartum hemorrhage. And not then except, as some authorities claim, that any profound hemorrhage seems at times to draw upon the blood-making organs beyond their power to respond, and that a slow progressively ineffectual effort is made to meet this de-

mand. But this seems to me only a partial explanation.

I will not attempt to discuss all of the well-known—if insufficient—theories of the cause of pernicious anemia.

Grawitz has somewhat recently shaken the foundation of our previous theories by stating that it is due wholly and exclusively to gastro-intestinal intoxication, or as some class it an auto-intoxication; that the diagnosis can be made alone by eliminating this factor by gastric lavage, enteroclysis and diet, and that if the disease is not cured by this process it is not pernicious anemia. He also maintains that the predominance of megaloblasts is not conclusive at all that the case is one of pernicious anemia. This we know has been regarded by most authorities as one of the most efficient diagnostic points that we possess.

This fact remains: There is much yet to be learned about pernicious anemia.

*CLINICAL EXPERIENCE WITH
PROF. DR. DUNBAR'S POL-
LANTIN IN TREAT-
MENT OF HAY
FEVER.*

By W. W. BULETTE, M. D., Pueblo.

It is not the object of this paper to discuss the cause or general treatment of hay fever, but to present the clinical history of my own case with three others, treated within the present season with Prof. Dunbar's serum—known commercially as "Pollantin."

The preparation which I used was obtained from Fritzsche Brothers, New York, the American branch of Schimmel & Co., Miltitz, Germany. In the literature sent out by the New York house, they say: "Pollantin is prepared under the supervision of the discoverer, Prof. Dr. Dunbar." Quoting further from the

literature sent me, they say: "Hay fever and similar complaints are caused by a poison, found in the pollen grains of certain plants, particularly of the grasses. Pollantin is an antitoxic serum won under aseptic precautions by means of such pollen."

"Pollantin is perfectly harmless even in large doses; it can be used by every hay fever patient, even if he be at the same time affected by another complaint; the beneficial influence on the hay fever, in such a case, will also favorably affect the general condition; repeated use of the serum will neither lessen its effects nor will it create a habit."

Quoting from an abstract of a paper "On the Serum—Treatment of Hay Fever," by Lubbert and Prausnitz, *Berliner Klinische Wochenschrift*, 1904, No. 11, the authors say: "In the course of the past year, Dunbar published in the *Berliner Klinische Wochenschrift*, 1903 (Nos. 24, 25, 26, 28), the results of his studies, so far as they were then advanced, on the etiology and therapeutics of hay fever. At the same time he promised to give a later report of the practical experiences obtained with his specific serum."

"Those researches left the question still open, as to whether the cause of hay fever, as it occurs in the whole civilized world, could be traced to one single exciting agent. Interest must still more center in this question since the successful treatment by antitoxic serum depends on the universality of the cause. Meanwhile Dunbar's pollen toxin has been tested, in regard to its effect on hay fever patients, in practically all civilized lands."

"Everywhere the same results were obtained. In different parts of Germany, in Denmark, England, Scotland, as also in the United States of North America,—whether in the northern districts, as in New York, Baltimore, St. Paul, Minn.,

and St. Louis, or in more southerly parts, as for instance in New Orleans,—the results were the same. Everywhere hay fever patients showed a specific susceptibility to the toxin, whereas control-persons, with only a few exceptions, such as had been already observed and described by Dunbar, were entirely insusceptible to the toxin."

"From the results obtained by these test experiments, the extremely important conclusion from the point of view of therapeutics can be drawn, viz., that hay-fever, wherever it occurs in the different civilized countries, is an affection having one single etiological factor, so far as concerns the exciting agent, and leaving out of account the cause of the individual predisposition. It may be assumed that there are different reasons for this predisposition. The universality of the exciting cause is, however, demonstrated by the fact that the symptom complex of hay fever, wherever the disease may be found in the world, is excited in the predisposed, exclusively through the pollen of certain plants, and more especially through the toxin obtained by Dunbar from them. Only in the case of autumnal catarrh, a disease closely allied to hay fever, which occurs in the United States of North America, is there this difference, viz.: that it is excited not by the pollen of grasses, but by the pollen of solidago, ambrosia and perhaps of other late flowering plants. These patients do not suffer at the time when the grasses are in flower, but in autumn. The relationship of autumnal catarrh to hay fever is shown by the fact that the disease is favorably influenced by the antitoxin derived from pollen of the graminaceæ."

Within the past ten years, enjoying a fairly extensive rhinological practice, I have seen many cases of hay fever, and the subject of etiology and treatment is very interesting to me. In 1903 I made

an estimate that in a population of 50,000 people in Pueblo, there were 4,256 suffering from the trouble. This estimate was made by noting the number of persons affected in given blocks in different sections of the city, and then counting the blocks of the whole city, and I believe that the figures given are fairly correct.

While I have but few patients among the foreigners and negroes of my city, yet I am satisfied from observation that the Austrians, Greeks, Poles, Russians, Syrians, Italians, Japanese, Chinese and negroes do not suffer with hay fever so much as the American white race.

I have seen hay fever in persons of all ages, from five years up. More cases occur in females than males.

No cases have ever occurred in my own family, either on paternal or maternal side, so far as I can learn. On July 6, 1904, I began to develop the characteristic symptoms of hay fever, and made careful notes each day, and present the important features here, for what they are worth. All day, July 6th, there was a peculiar numbness of the nose externally, with a burning sensation in the nares, and itching of the soft palate; tingling of finger tips and toes, with some aching of the joints of the legs; was restless and wakeful that night. On July 7th and 8th the symptoms were intensified, with addition of nausea and anorexia, and throbbing pain about bridge of the nose and forehead. Temp., 8 p. m., 100° F. on 7th, and 100.5° on 8th. On morning of 9th, I awoke with nares completely occluded, fauces dry, eyelids red and conjunctivæ much injected. Was seized with a violent sneezing attack, followed with a profuse watery discharge from the nose, with lacrimation. This was followed by hot skin, tickling in the throat, painful deglutition, hoarseness and tinnitus aurium.

I made several examinations of the

urine from July 9th to Aug. 11th—the day the symptoms subsided—and found the specific gravity to vary from 1020 to 1026; it was often highly colored, and loaded with urates and products of nitrogenous waste; no albumen or sugar at anytime.

On coming to my office on July 9th, I placed myself on calomel 1-20 gr. t. i. d. before meals, continued for two weeks; also "Effervescent Salicylos" (each dessert spoonful of which contains 5 gr. each of salicylates of strontium and ammonium, 2 gr. lithium bitart, and sodium bicarb. in excess) between meals, and used a nasal spray, as needed, and an ointment of menthol, gr. 1, suprarenal capsules dessicated, gr. xx, eucalyptol gtt. v, Lanolin and Petrolatum aa ʒii. Under this treatment I was fairly comfortable and able to attend my office.

On July 14th I ordered from Fritzsche Bros. a package of "Pollantin" powder, as it is claimed "the powder is more efficient than the liquid." I received the sealed package on July 21st at 3 p. m. Was then feeling fairly comfortable, but wishing to try the serum on myself, I sprayed my nose, then sniffed the prescribed dose into each nostril, according to directions. In ten minutes my nostrils became completely occluded, followed by hoarseness and labored breathing, with cough. This condition continued until 10 p. m., when I found pulse 120, temp. 101° , and breathing so difficult that I was obliged to sit up in bed and gasp for breath; in short I had all the symptoms of a violent asthmatic attack. These symptoms lasted until well toward morning. The following day I was prostrated, had a violent headache and was nauseated, and there was hoarseness, with cough, and frothy expectoration. On July 23d I applied the usual dose of "Pollantin" on arising. This was followed by the same symptoms as on the

21st. The serum was then discarded, and the alkaline sprays and ointment above described substituted, with 1-30 gr. strychnia t. i. d. for seven days, in addition to the calomel and Effervescent Salicylos.

I prescribed the serum for three patients, two women and one man, all of whom had been under my care for one or two weeks. This was their first hay fever season. None of these patients had ever had any asthmatic symptoms, and had been comfortable and satisfied with their treatment previous to taking "Pollantin." They were all affected similarly to myself after taking the serum; one left me in disgust, the other two continued my previous treatment and were benefited.

In Pueblo the hay fever season begins about April 20 and usually lasts until August 22, according to my records for past ten years. In my opinion, hay fever is caused in 95 per cent. of the cases that I see, from the pollen or cotton from the cotton wood tree; the balance, from various flowers, weeds and grasses. I have never seen rag weed growing in or about Pueblo, and there is no grain raised within many miles. I rarely see a case of the autumnal variety of hay fever;—would say one in three hundred—as it occurs east of the Mississippi.

I have nothing but praise to offer for the scientific research of Prof. Dunbar, and the confirmatory observations of Throst, Semon, McBride, Mayer, Leifman and others, but Pollantin certainly greatly aggravates and does positive harm to cases of hay fever occurring in my section of the Rocky Mountain region.

From my own observations I conclude:

I. That hay fever is caused by a poison circulating in the air, which poison coming in contact with the nasal se-

cretion produces a toxin, which is absorbed into the blood and causes a mild septicemia.

II. That hay fever is not a disease, but a symptom-complex. In the vast majority of cases, the neurotic element predominates. In the other cases there is some defect in metabolism causing excess of the products of nitrogenous waste in the blood.

III. That hay fever never occurs in persons with healthy nares.

IV. That every case is a law unto itself, and must be treated according to the symptoms that arise.

V. That the symptom-complex is preventable, and that 75 per cent. of cases can be permanently cured by intelligent treatment.

Discussion.

Dr. J. T. Melvin—This is a most suggestive paper by Dr. Bulette and one of direct value to every general practitioner as well as to those making a specialty of such troubles. We all see these cases of hay fever every year, and are glad to know how Dr. Bulette handles them, and what degree of success he has had with this vaunted remedy.

Most valuable points which the doctor emphasized are that there are many causes and many manifestations of this disease, and that routine treatment will not be successful in any large number of cases. That we must study each case individually to arrive at a knowledge of its own special cause and proper treatment. My own experience has been that faulty metabolism in a neurotic patient was the main element, and the particular external irritant of minor importance. The doctor alludes to the increase of this trouble being every year coincident with the flowering of the cottonwood. In my own district I have never noticed its recrudescence at that time, but rather about thirty days later, when the helianthus, or false sunflower, begins to spread its yellow blossoms over so many acres of the landscape. Whatever the causative irritant in different localities, however, I think in general practice we get satisfactory results from thorough elimination by bowels and kidneys, together with adrenalin and soothing applications locally.

PROPOSED MEDICAL LAW.

The following is now before the Legislature embodied in House Bill No. 148, introduced by Mr. Dickson; and Senate Bill No. 165, introduced by Senator Robertson:

Section 1. A board is hereby established to be known by the name and style of the State Board of Medical Examiners. Said board shall be composed of nine practicing physicians of integrity and ability, who shall be residents of, and have been duly licensed to practice medicine in this state, and who shall have been graduated from medical schools of high educational requirements and standing, and have been engaged in the active practice of their profession within this state for a period of at least five years. Said board shall perform such duties, and possess and exercise such powers, relative to the protection of the public health and the control and regulation of the practice of medicine in this state as shall be in this act prescribed and conferred upon it.

Sec. 2. The Governor shall appoint nine physicians, who shall possess the qualifications specified in section 1 of this act, to constitute the members of said board. Said members shall be so classified by the Governor that the term of office of three shall expire in two, three in four and three in six years from the date of appointment. Biennially thereafter the Governor shall appoint three members, who shall possess the qualifications as specified in Section 1 of this Act, each to serve for the term of six years, and he shall fill vacancies in the membership of said board as soon as practicable.

Sec. 3. Said board shall biennially elect a president, a vice-president and a secretary-treasurer from their membership, and adopt a seal which shall be affixed to all certificates issued by them. They shall from time to time adopt a schedule of minimum educational requirements, and such rules and regulations as they may deem necessary for the performance of their duties. When an applicant for a license offers to the board satisfactory proof that he has complied with such educational requirements as are specified in said schedule, the board shall without prejudice, partiality or discrimination, as to schools or systems of practice of medicine, accept such proof as sufficient evidence of the educational qualifications of the applicant to entitle him to a license without examination; Provided, however, that

at no time shall said schedule for graduates since January 1, 1900, A. D., specify the attendance upon less than four full courses of instruction in four separate years in a reputable medical school. They shall keep on file with the Secretary of State for public inspection a copy of their schedule of educational requirements, and rules and regulations.

Sec. 4. Any person wishing to obtain the right to practice medicine in this state, who has not heretofore been licensed so to do, shall before it shall be lawful for him to practice medicine in this state, make application to said State Board of Medical Examiners, through the secretary-treasurer thereof, upon such form and in such manner, as shall be adopted and prescribed by the board, and obtain from the board a license so to do. Unless such person shall have obtained a license as aforesaid it shall be unlawful for him to practice medicine in this state; and if he shall practice medicine in this state without first having obtained such a license he shall be deemed to have violated the provisions of this act. All applicants for a license to practice medicine, or for a renewal of any such license which has been revoked, shall furnish the board with satisfactory evidence of good moral character.

Sec. 5. Said board shall have authority to administer oaths, to summon witnesses and to take testimony in all matters relating to their duties. Said board shall issue licenses to practice medicine to all persons who shall furnish satisfactory evidence of attainments and qualifications under the provisions of this act and the rules and regulations of the board. Such licenses shall be signed by the president and attested by the secretary-treasurer of the board under its adopted seal, and they shall be absolute authority to the persons to whom they are issued to practice medicine in this state. It shall be the duty of the secretary-treasurer under the direction of the board, personally or by deputy, to aid the several district attorneys of the state in the enforcement of this act and in the prosecution of all persons charged with violating any of its provisions.

Sec. 6. There shall be paid to the secretary-treasurer of the State Board of Medical Examiners by each applicant for a license a fee of twenty-five dollars (\$25.00), which shall accompany the application. Two-fifths of the fee shall be returned to the applicant in case the board shall refuse to grant him a license.

Sec. 7. Examinations of applicants for

license to practice medicine shall be made by said State Board of Medical Examiners, according to the method deemed by it to be the most practicable and expeditious to test the applicant's qualifications. The subjects of written, oral or clinical examinations shall be as follows: anatomy, physiology, chemistry, symptomatology, toxicology, pathology, surgery and obstetrics (exclusive of materia medica and therapeutics). The credentials of applicants relating to their general reputation, their preliminary education and the courses of study they have pursued; the degrees they have received; the number of years they have been engaged in the lawful practice of medicine; their experience in general hospitals, medical departments of the army, navy and public health and marine hospital service; licenses granted to them by other states and countries; and their experience as teachers of medicine, shall be given due consideration by the board in conducting its examinations. Upon investigation of an applicant's credentials the board shall, when convinced that an applicant is qualified to practice medicine, grant him a license thereon without further examination.

Sec. 8. Every person who shall receive a license from the State Board of Medical Examiners shall have it recorded in the office of the recorder of deeds of the county in which he resides, and shall likewise have it recorded in the counties to which he shall subsequently remove for the purpose of practicing medicine. The failure on the part of the holder of a license to have it recorded prior to commencing practice, shall render it null and void.

Sec. 9. The recorder of deeds of each county in this state shall keep for public inspection, in a book provided for that purpose, a complete list and description of the licenses recorded by him. When any such license shall be presented to him for record he shall stamp or write upon the face thereof his signed memorandum of the date when such license was presented for record.

Sec. 10. The State Board of Medical Examiners may refuse to grant, or may revoke, a license to practice medicine in this state, or may cause a licentiate's name to be removed from the record in the office of any recorder of deeds in the state upon any of the following grounds, to-wit: The employment of fraud or deception in applying for a license, or in passing the examination provided for in this act; the practice of medicine under a false or as-

sumed name, or the personation of another practitioner of a like or different name; the conviction of a crime involving moral turpitude; habitual intemperance in the use of ardent spirits, narcotics or stimulants; incapacity for professional duties; the procuring or aiding or abetting in procuring a criminal abortion; the obtaining of a fee on the representation that a manifestly incurable disease can be permanently cured; causing the publication and circulation of an advertisement of any medicine or means whereby the monthly periods of women can be regulated, or the menses, if suppressed, can be re-established; causing the publication and circulation of an advertisement relative to any disease of the sexual organs. Any person, who is a licentiate, or who is an applicant for a license to practice medicine, against whom any of the foregoing grounds for revoking, or refusing to grant, a license is presented to said board with a view of having the board revoke, or refuse to grant, a license, shall be furnished with a copy of the complaint, and shall have a hearing before said board in person or by attorney, and witnesses may be examined by said board respecting the guilt or innocence of said accused. Said board may at any time within two years from the refusal or revocation of a license or cancellation of registration under this section, by a majority vote, issue a new license, or grant a license, to the person affected, restoring, or conferring, all the rights and privileges of, and pertaining to, the practice of medicine as defined and regulated by this act. Any person to whom such rights and privileges have been so restored shall pay to the secretary-treasurer a fee of ten dollars (\$10.00) upon the issuance of a new license.

Sec. 11. The terms, "practice of medicine," "to practice medicine," "practicing medicine" and "practice medicine," as used in this act are each hereby defined to mean holding oneself to the public as being engaged within this state in the diagnosis and treatment of diseases or injuries of human beings; or the suggestion, recommendation or prescribing of any form of treatment for the intended palliation, relief or cure of any physical or mental ailment of any person, with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or the maintenance of an office for the reception, examination and treatment of any person suffering

from disease or injury of body or mind; or attaching the title of M. D., surgeon, doctor, or any other word or abbreviation to his name, indicative that such person is engaged in the treatment or diagnosis of the diseases or injuries of human beings. If any person shall hold himself out to the public as being engaged within this state in the diagnosis and treatment of diseases or injuries of human beings; or shall suggest, recommend or prescribe any form of treatment for the palliation, relief or cure of any physical or mental ailment of any person with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or shall maintain an office for the reception, examination and treatment of diseased or injured human beings; or shall attach the title of M. D., surgeon, doctor, or any other word or abbreviation to his name indicative that he is engaged in this state in the treatment of diseased or injured human beings; and shall not in any of these cases, theretofore have received, or shall not in any of these cases, then possess, in full force and virtue, a valid license to practice medicine under the laws of this state, he shall be deemed to be practicing medicine without complying with the provisions of this act and in violation hereof. Nothing in this act shall be construed to prohibit gratuitous service in case of emergency, nor the practice of the religious tenets of any church whatsoever, nor shall it apply to commissioned surgeons of the United States army, navy or public health and marine hospital service, while so engaged, nor to regularly licensed physicians called from other states or territories to attend specific cases in this state, nor the practice of dentistry.

Sec. 12. Any person practicing medicine in this state, without complying with the provisions of this act, or any person who shall have violated the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than fifty dollars (\$50.00), nor more than three hundred dollars (\$300.00), or by imprisonment in the county jail for not less than ten (10) days nor more than thirty (30) days, or by both. Any person presenting or attempting to file as his own, the diploma or certificate or credentials of another, or who shall give either false or forged evidence of any kind to the State Board of Medical Examiners, or any member thereof, in connection with an application for a license to practice medicine, or who shall practice medicine under a false or

assumed name, or who shall falsely personate another practitioner of a like or different name, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by imprisonment in the state penitentiary for a term of not less than one (1), nor more than ten (10) years, at hard labor.

Sec. 13. All fees received by the State Board of Medical Examiners and all fines collected by any officer of the law under this act, shall be paid to the Secretary-Treasurer of said Board, who shall, at the end of each and every month, deposit the same with the State Treasurer; and the said State Treasurer shall place said money so received in a special fund, to be known as the fund of the State Board of Medical Examiners, and shall pay the same out on warrants drawn by the Auditor of the State therefor, upon vouchers issued and signed by the president and secretary-treasurer of said board. Said moneys so received and placed in said fund may be used by the State Board of Medical Examiners in defraying their expenses in carrying out the provisions of this act. At the end of every biennial period, if there shall remain in said fund any balance, said balance shall be transferred to the general revenue fund of the state. The secretary-treasurer of said board shall keep a true and accurate account of all funds received and all vouchers issued by the board; and on the first day of December of each year he shall file with the Governor of the State a report of all receipts and disbursements for said board for the preceding fiscal year. Members of said board shall receive a per diem for the time during which they shall be actually engaged in the discharge of their duties; and the secretary-treasurer shall receive a salary; said per diem and salary shall be fixed by the board, and together with all other expenses shall be paid out of the fund of the State Board of Medical Examiners.

Sections 14 and 15 of the law of 1881 are retained.

COUNTY MEDICAL SOCIETIES.

Boulder County Medical Society met in regular session at the County Court House at 8 p. m., January 5th, 1905, President W. W. Reed in the chair. Those present were Drs. Queal, Geo. Cattermole, Reed, Giffin, Bell, Miles, Rhodes and Gilbert.

The evening was devoted to clinical reports

and election of officers. A letter was read from the State President requesting the co-operation of the County Medical Society in securing the passage of the proposed medical law. The legislative committee was advised to confer with our senator and representatives in regard to the matter.

Dr. Geo. Cattermole reported a case of a piece of duck bone lodged in the pharynx behind the posterior pillar of the fauces, which the patient insisted, was low down in the esophagus. It was $1\frac{1}{4}$ inches in length, quite deeply imbedded and each act of deglutition seemed to imbed it more deeply. It was removed without much difficulty and patient recovered promptly.

Dr. Miles reported a case of a bone about 1 inch in length being lodged in the rectum, transversely, just above the internal sphincter. Both ends were imbedded. It was removed with considerable difficulty. It caused rather severe symptoms, but no abscess followed.

Dr. Giffin reported a case of puerperal eclampsia seen in consultation. According to the report of the attending physician there was no evidence of trouble up to $7\frac{1}{2}$ months, and urine showed no albumen. At $8\frac{1}{2}$ months the attending physician was called on account of a sudden attack of eclampsia. The husband reported that there had been edema of the face, neck and extremities for two weeks previously, and for several days there was intense headache and anorexia, all of which was attributed to a cold.

The eclampsia set in about 8 a. m. and there were nine convulsions during the day. All efforts to induce pains were fruitless, so at 8 p. m. it was decided to evacuate the uterus. The patient being deeply comatose, this was done by manual dilatation and podalic version, all being accomplished in about 45 minutes. The placenta also required manual extraction.

There were no more convulsions after the delivery, but pulse weak, and strychnia and nitro glycerine had to be used. Later packs were used and saline infusion. The coma slowly abated and circulation improved, but at the end of 15 hours, the coma still being quite profound, lumbar puncture was attempted, but only a few drops of cerebro-spinal fluid was obtained; not enough to be of any service.

The patient, however, slowly regained consciousness and made a slow but uneventful recovery. The first urine was obtained by catheter about 12 hours after delivery. It so completely congealed upon heating that the

tube could be inverted without the contents being spilled. The albumen, however, gradually disappeared and in 10 days this was practically absent.

The patient's mind gradually cleared as to events before and after the attack, but remained a blank for 2 or 3 days before and after delivery.

Dr. Giffin also reported a case of infection from dead fetus of about 5 months. The temperature was 104° but dropped promptly upon evacuation of uterus.

Dr. Gilbert reported two cases of deep infection of the forearm with somewhat obscure histories. First patient gave a history of a blow on the back of the forearm and wrist to which he attributed his condition, and the case was first treated as such. But upon a second examination it was found to be an infected condition, and focus of infection was found to be a small abrasion on the knuckles. Pus soon formed and symptoms of general infection were somewhat marked—delirium, etc. After evacuation of pus the patient made a slow but uninterrupted recovery.

In the other case it was attributed to the bursting of a blood vessel while lifting heavily. Fluctuation was found upon the flexor surface of the forearm and a large amount of dark grumous blood was evacuated. Temperature was then $101\frac{1}{2}^{\circ}$, and there was some evidence of septic absorption. The case in spite of being drained, suppurated and proved to be quite an obstinate case of infection. The focus of infection was not found.

He also reported a case of typhoid which had a genuine uncomplicated relapse on the 13th normal day. Patient had not taken solid food but was sitting up.

Dr. Cattermole suggested that some provision should be made for the care of consumptives, as none of the sanitariums or hospitals and few private houses will accept them. Their condition is very deplorable. The opinion was heartily concurred in, but no solution of the problem was reached, as it was recognized that it would take considerable outlay of money without any hope of dividends. All the members were requested to bear the matter in mind and it is hoped to find a way to provide a home for them.

The name of Dr. Chas. A. Cattermole was proposed for membership by Drs. Queal and Gilbert. The officers were elected for the ensuing year. (See page 64).

The question of constitutional amendments

suggested by the State Society was referred to, but it was found that essentially all of them were included in our constitution as it stands, so it was decided to take no action.

The Society adjourned to meet the first Thursday in February.

O. M. GILBERT, Sec.

Denver.—The annual meeting of the Medical Society of the City and County of Denver was held in the Academy of Medicine Hall, Tuesday, January 3rd.

The address of the retiring President, Dr. S. D. Hopkins, constituted a valuable epitome of the present knowledge regarding Tendon Transplantation and Nerve Grafting. It will be published in full in an early number of **COLORADO MEDICINE**.

The report of the Recording Secretary showed an average attendance for the past year of 47 at each meeting; and that but one member had been dropped for non-payment of dues.

The report of the Financial Secretary showed that the Secretary's income had been over \$1,200.

After the election of five members the officers were chosen for 1905. (See page 64).

Amendments to the by-laws were adopted, making members delinquent and suspending them for non-payment of dues, on or before July 1st; and dropping them from the roll of membership, if dues for the current year were not paid on or before the first of August.

January 17th.

Dr. J. D. Gibson read a paper entitled **Further Researches in Tuberculosis**. Dr. Gibson laid special stress on the value of X-Rays, rest and antistreptococcic serum. He spoke of their use in different stages and under different conditions, especially in pulmonary tuberculosis.

Dr. Beggs spoke of his experience with antistreptococcic serum and of its value in mixed infection. It lowered the temperature and seemed to lessen the other symptoms, although it did not save the patient for any great length of time.

Dr. Simon did not think the relief afforded justified its use.

Dr. Moleen thought it of great use. It caused the disappearance of streptococci.

Dr. Stevens thought rest very important, although Eastern physicians sometimes advised patients coming West to do a great deal of

mountain climbing. This does great harm in cases with elevated temperature.

Dr. Stover did not think that we have sufficient evidence to say that X-Ray is of any great help.

Dr. Gibson, in closing, said a great deal depended upon the tube used in each case.

Dr. Gage gave as a **Theory of Skin Diseases** the failure on the part of the skin to elaborate the normal amount of secretion; or the action on the part of a diseased or normal skin to throw off abnormal amounts.

Dr. Midgley said that he had brought forward a part of this theory, but that it was not generally accepted.

T. E. CARMODY, Secretary.

El Paso County.—The regular monthly meeting of the El Paso County Medical Society was held at the Antlers, Colorado Springs, Wednesday evening, January 11th.

A resolution presented at the last meeting changing the by-laws of the Society in order to make them conform to the laws of the State organization, as suggested by the Committee on Organization of the State Society, was adopted.

Dr. Gerald B. Webb read a paper on **Some Cured Cases of Grave's Disease**, reporting two cases cured by an original method. The discussion was participated in by Drs. Friedmann, Hutchings, Reynolds, M. H. Smith and W. H. Swan.

M. P. REYNOLDS, Secretary.

Fremont County.—The annual meeting of the Fremont County Medical Society was held January 3rd. It was called to order by President Little at the office of Dr. Rambo in Florence.

The members present were Drs. Little, Carrier, Moore and Phelps, from Canon City; Condit, Rambo, Edwards, Cummings and Adkinson, from Florence. Dr. Meyer of Florence was a visitor.

The minutes of the previous session were read and approved. Reports of several exceedingly interesting cases were presented by Drs. Edwards, Rambo, Moore, Phelps, Cummings and Little.

Dr. Carrier presented an unusually well written paper on **Empyema**, laying especial stress on the importance of and methods of diagnosis. The paper was freely discussed by the members present.

The Society then proceeded to the election of officers for 1905. The nominating committee presented several names from which were selected the list of officers. (See page 64).

The application of Dr. G. C. Emery was received and acted upon favorably by the Society. The Secretary was instructed to forward a check for \$20.00 as a contribution to the Colorado Medical Legislative League.

The Society by-laws were amended to conform to the suggestions of the Committee on Organization of the State Society.

The Society then adjourned to meet in Canon City on the first Monday in March, after which refreshments were served and a social hour spent.

ROYAL C. ADKINSON, Secretary.

Lake County.—A regular meeting of the Lake County Medical Society was held January 5th at the office of Dr. A. J. McDonald, Dr. E. A. Whitmore presiding.

The Society adopted the revised bylaws in accordance with those of the State Society, and the A. M. A. Then, under these new by-laws, was held the election of officers for 1905. (See page 64). All officers were elected by acclamation.

Circular letters were read from Dr. Frank Finney, President of the State Society, and Dr. Catherwood, Secretary and Treasurer of the Colorado Medical Legislative League, urging the co-operation of the County Societies, and also their financial assistance. Lake County Medical Society voted to contribute \$20 to assist in the work of the League.

Report of Clinical Cases.

Dr. Griffith and Dr. A. J. McDonald reported some interesting cases of **smallpox**, especially a case of child that evidently contracted the disease in utero.

The Society will hold their next regular meeting at the office of R. J. McDonald. Dr. A. J. McDonald will present a paper.

R. A. CALKINS, Secretary.

Larimer County.—The Larimer County Medical Society met in Fort Collins January 4th. Present, Drs. Kickland, Haviland, J. J. Holley, Morrill, Fee, Reckley, McHugh and Stuver.

The recommendations of the Committee on Organization of the State Medical Society were read by the presiding officer, Dr. Kickland. The officers for the ensuing year were then unanimously elected. (See page 64).

The general good of the Society was then quite freely discussed and the Secretary was instructed to invite all reputable physicians in the county who are eligible for membership to join.

Dr. McHugh then reported a case of pronounced **Vertigo, following paracentesis membrani tympani**. This report elicited a discussion which was participated in by nearly all of the physicians present.

The Society then adjourned to meet the first Wednesday in February.

E. STUVER, Secretary.

Las Animas County.—The Las Animas County Medical Society held its regular meeting January 6th at the office of Dr. D. F. Dayton. Dr. W. G. Robinson presented a paper, with report of cases, on **Multiple Neuritis**, which was enjoyed by all. Discussion was rather slow in coming, as this seemed to be an uncommon malady among us. Dr. Robinson was evidently making more than the usual progress toward recovery, when a charlatan in the form of a faith healer interrupted the treatment.

According to the by-laws recently adopted, this was the night of our annual election, and the following were selected for the ensuing term: President, Dr. R. G. Davenport; Vice-President, A. Freudenthal; Delegate, J. R. Espey; Treasurer, B. Beshoar; Secretary, James G. Espey.

JAMES G. ESPEY, Secretary.

The Mesa County Medical Society met in regular session in Grand Junction on Tuesday evening, January 3, 1905, at the office of Dr. F. R. Smith. The following members were present: Drs. Abbott, Bull, Day, Ingersoll, Hanson, Henderson, Smith, Warner and Taylor; also Dr. Albert Silverstein of Denver, who was our guest.

Dr. F. R. Smith reported a clinical case, that of a **compound fracture of the leg** occurring in a man and caused by a log rolling from a height and catching the limb. The site of the injury was immediately below the tubercle of the tibia and three-fourths of the leg in a half-moon shape had been removed by the log. The leg was dressed, saved and made very serviceable to the owner for many months. Later the man sustained a fracture at the site of the old injury and amputation was found necessary.

Dr. A. G. Taylor read a paper entitled **The**

Dietetic Treatment of Constipation. In this paper particular attention was paid to the fact that it is not a difficult matter in most cases to enforce a proper diet. Get the patient's co-operation and this feature is almost always solved. Three things are to be insisted upon: (1) The habit of a regular time for waiting upon the bowels. (2) A proper amount of physical exercise. (3) A proper diet. Suitable vegetables are to be used freely, butter and cream very liberally and meats containing a large amount of fat are to be preferred to lean. White bread should be entirely discarded and in its place advise the use of graham bread, Boston brown bread, corn bread and rye bread. Few persons take a sufficient amount of liquid. A drink of plain cool water taken on an empty stomach will stimulate intestinal peristalsis. Select water as free as possible from lime salts. Buttermilk is useful in a majority of cases. If wine is desired, it should be a white Rhine wine or Moselle, and not a claret or other red wine containing tannic acid. In some cases where the accompanying symptoms are distressing it is sometimes advisable to use some additional means of moving the bowels in order to secure immediate relief. For this purpose cascara internally is usually very serviceable. The writer does not claim everything for this method, but is firmly convinced that it is of sufficient import to deserve more attention from the general practitioner than it receives.

The matter of the amended by-laws was taken up and adopted with the exception of rule six (6) as recommended by the State Society.

The case against Dr. E. F. Eldridge, who has used questionable means of advertising since becoming a member of the Society, was taken up and discussed at length, and after due deliberation the doctor was suspended from membership in this Society.

The officers of the Society elected at the last annual meeting were re-elected to fill out the term intervening between this date and January, 1906.

At the close of the meeting the members enjoyed the hospitality of Dr. Smith and an hour's social session was held.

A. G. TAYLOR, Secretary.

The Otero County Medical Society met January 10 at La Junta.

The amendments to the by-laws as sent out by the State Society were adopted.

Dr. J. P. Kaster, chief surgeon A. T. & S. F. R. R. of Topeka, Kan., entertained the Society for an hour and a half, taking as the subject **Fractures**. The doctor is a fine talker and the address was listened to very closely by all the members present.

Those present were: Stubbs (Jessie), Stubbs (A. L.), Finney, Ragsdale, Hall, Moore, Donlon, Kearns, Haskins and Edwards, all of La Junta, and Sigman, Shelton and Kearby, of Rocky Ford.

Pueblo County.—The regular meeting of the Pueblo County Medical Society was held December 20th, with good attendance.

Dr. W. H. McDonald read a paper entitled **The Humane Statutes of Colorado From the Standpoint of the Medical Man**. Attention was called to the humane statutes and to the conditions in and about Pueblo as observed by the writer during a period of about two years. He spoke of the importance of kind and considerate treatment of dumb animals, and the necessity of enforcing the law against those guilty of abuse or neglect of them. Evil of this kind in one community arose from the delusion that the condition of a poor family is greatly improved by owning a horse; the result being neglect and starvation of the animal and trouble for the owner. The neglect of live stock on the range will require determined action in the near future, as they are often left to shift for themselves in the face of great difficulty to procure food and water.

Mention was made of the importance of regulating the treatment of dumb animals, not only on account of pity for their suffering, but because by attention to the laws for their protection, we insensibly become enlisted in the lawful protection of children as well. The value of invoking the provisions of the law in behalf of the young, about the age of puberty, when dissatisfaction with their condition results in boys becoming thieves, and girls resorting to methods of securing money that will prepare them to become prostitutes, was dwelt upon. The humane agent can send the boys to the juvenile court, where the court will have supervision of them; but not confine them with older and more hardened criminals. The girls may be sent to the State Industrial School; the humane agent can at least hold over them the possibility of a resort to the provisions of the law and thus enforce the parental authority.

In closing, a plea was made for volunteers to increase the working force of the Humane Society, and, as physicians are interested in the welfare of all, their services are especially desired in order that the work, which is a contribution of time and energy to the general welfare, may be adequate to the requirements of the community.

A general discussion followed the reading of the paper and all had words of commendation for the work that has been done by the Humane Society in this city.

It was decided at this meeting to hold the future meetings of the Society in the Assembly room of the McClelland Public Library.

Drs. A. J. Schoenberg and J. E. Pairs were elected to membership, and the application of Dr. M. S. Middlekamp was read and referred to Membership Committee.

January 3rd.

The regular meeting of January 3rd was held in McClelland Library. Paper read by Dr. Marbourg on **Burns of the Eye**. The doctor read a short but practical paper devoted principally to treatment.

Dr. O. F. Adams was elected a member of the Society, and the applications of Drs. F. W. Hammond and Anna Cross were read and referred to the Membership Committee.

M. J. KEENEY, Secretary.

San Luis Valley.—Last meeting of the San Luis Valley Medical Society was held at Del Norte and the Society entertained by Drs. McFadzean and Weiss of Del Norte and Dr. Melvin of Saguache.

Dr. C. B. Lyman was the invited guest of the Society and read a paper on **Appendicitis**. In addition to this paper the Society listened to and discussed the following papers: "Early Medical History," Dr. Weiss; "Corneal Opacities," Dr. Whedon; "Female Changes," Dr. Melvin.

Clinical Cases were presented by Drs. McFadzean and Whedon.

A delightful banquet was spread by the entertainers which was enjoyed by the professional men of Del Norte, and the members of the Society.

A vote of thanks was extended to Dr. C. B. Lyman for his able paper and to the entertainers, Drs. McFadzean, Melvin and Weiss.

E. E. WHEDON, Secretary.

ary 24th, 1905, with Dr. V. R. Pennock in regular session. The minutes of the last meeting were read and approved.

The President appointed Dr. A. I. Hayes, J. B. Polly and Z. E. Funk to constitute a board of censors.

The names of Drs. Guy S. Vinyard, of Woodland Park, and Vander Scow, of Independence, were proposed for membership.

Dr. A. C. Magruder explained his letters to the physicians of the Society, asking data on pneumonia in the Cripple Creek district, occurring this year.

The following resolution was then presented and adopted:

"Whereas, A bill for a constitutional amendment permitting the Medical School of the State University at Boulder to conduct the last two years of said school at Denver is now pending before the Legislature, be it

"Resolved, That in the opinion of this Society, since said medical school is the only medical school supported by the state and should have every advantage which the state can furnish, and since ample clinical opportunities are absolutely necessary in modern efficient medical training, and since the clinical advantages afforded by a small city like Boulder, no matter how carefully conducted the hospital at that place may be, are necessarily inferior to those afforded by the city of Denver, the metropolis of the inter-mountain country, said proposed amendment should receive the hearty support of the medical fraternity of the state, to the end that we may see built up at Boulder and Denver, under the support of the state, a medical school which shall prove equal to, if not superior, to any school between Chicago and San Francisco."

The Society then adjourned to the Masonic banquet room, where Dr. Pennock expressed his thanks to the Society conferred upon him in his election to the presidency, and asked Dr. J. Ernest Meire to act as toastmaster of the evening.

Dr. Cowen responded to the request of the toastmaster with a short discussion of the prevalence of la grippe. He reported a case of miscarriage caused by Grippe toxemia.

Then followed a general discussion of the prevailing malady, in which a number of complications, both usual and unusual, were considered.

Pneumonia being the subject assigned for the evening's discussion, each one was requested to give in a few words his treatment.

The Teller County Medical Society met Janu-

Dr. Pennock—Calomel for purgation. Digitalis during first twenty-four hours to physiological effect. Creosotal 20 m. every hour until system is well saturated. Stimulation as required.

Dr. A. I. Hayes—Calomel and powdered C. C. pill in large and frequent doses. Strychnine, grs. 1-30, and cocaine grs. 1-6, every four hours. Blister for pain.

Dr. Latimer. Elimination with calomel or C. C. pills. Guaiacol grs. 5 to 10, and for dry skin, pilocarpine as needed to keep secretions free. He layed great stress upon the good effect of the drug, on the cough, respiration, and pulse. He also spoke against the use of alcohol.

Dr. Jones—Calomel, strychnine and poultices.

Dr. Manley—Calomel, aconite in drop doses, quinine and ammon. carb.

Dr. Andrew Hayes—Aconite for fever. Strychnine and digitalis as needed.

Dr. King—Salicylate of soda (true), grs. 30, hourly until physiological effect, stimulation as needed. He spoke especially in favor of whiskey. He believed one might drown a patient by giving much pilocarpine.

Dr. Gaston—Ammonia to liquefy secretions. Antiphlogistine jacket.

Dr. H. St. Clair—Early in the disease, sod. sal. grs. 20, every two hours; later, 10 grs. Mustard over the chest.

Dr. T. McIntyre—Liked action of sodium salicylate in some cases. Cotton jacket. Strychnine and whiskey as indicated.

Dr. J. B. Polly—Agreed with Dr. Latimer except in the use of pilocarpine.

Dr. Katherine Polly—Spoke of the danger of moving patient. Advocated keeping them, if possible, in the same room where they were first taken sick.

Dr. Cohen—Considered statistics valueless. Double pneumonia is invariably fatal. Single gets well. He advocated drinking large amounts of hot water. Ice bags for pleuritic pains. Hot packs to aid or hasten crisis. Pneumonic serum, a possible success in the future.

Dr. Driscoll—Enthusiastic in the use of pilocarpine. Reports 256 cases with 11 deaths, by its use.

Dr. Thomas—Calomel, strychnine and cotton jacket. He commented on the absence of advocates for tartar emetic, veratrum viride, bleeding, protonuclein and antimony.

Other medical topics were discussed by Drs. Magruder, Morris, Funk, Hummercutt and Dunwoody, to the profit of all present.

The Society then adjourned to meet the fourth Tuesday of February.

H. G. THOMAS, Secretary,

Weld County.—The Weld County Medical Society turned out in large and enthusiastic numbers to attend the first meeting of the year, held in Dr. Law's office, on the evening of Monday, January 30th.

The meeting being called to order, Dr. Ringle reported a case of mixed astigmatism, still under his inspection.

Dr. Spratling reported a case of **Gangrene of Perineum and Scrotum** following Orchitis, and due to application of a solution of carbolic acid on compresses. The entire scrotum had sloughed away and the patient seemed to think he had reasonable ground for instituting a damage suit.

The bill to amend the act entitled, "An Act to Protect the Public Health and Regulate the Practice of Medicine in Colorado," was read and discussed. It was then moved, seconded and carried, that this Society approve of this bill, and endorse it in its entirety and that legitimate means be used to secure its passage in the present session of the legislature.

Dr. J. N. Hall, of Denver, present by invitation, delivered the address of the evening, entitled, "The Value and Significance of Certain Symptoms in Abdominal Diseases." Dr. Hall's remarks covered a wide range and were plentifully interspersed by short clinical histories of his own cases.

Dr. Perkins, of Denver, who was also present, in opening the discussion congratulated Dr. Hall on his diagnostic acumen, and referred to a case in which Dr. Hall diagnosed a case of appendicitis as due to six No. 7 bird shot in the appendix; subsequent operation revealed seven No. 6 bird shot in that organ.

Continuing, Dr. Perkins detailed the value of operative treatment in the class of cases referred to by Dr. Hall.

Several members of the Society briefly discussed and endorsed points brought out in the preceding remarks.

A vote of thanks to the visiting confreres from Denver was heartily and unanimously passed.

Before adjournment Dr. Hall extended to the Society and its visitors an invitation to an impromptu oyster supper and thereby assist in the assimilation of the truths of medical science.

C. B. DYDE, Secretary.

OTHER MEDICAL SOCIETIES.

The Denver Clinical and Pathological Society met in the Academy of Medicine Hall, January 13th, 1905.

Dr. Hall exhibited a specimen of **tape worm**, variety not known.

Dr. Freeman exhibited numerous **renal calculi** from an old and much enlarged suppurating kidney, which was not tender previous to operating. No urine came from the segregator on the right side. The kidney was removed through posterior incision. Discussed by Drs. Powers and Craig.

Dr. Wilder exhibited sections from the lungs shown by Dr. Sewall at the previous meeting, confirming diagnosis of **anthracosis** and pulmonary tuberculosis.

Dr. Grant exhibited a specimen of omentum from a male of 27 years showing **torsion of the omentum**, which was gangrenous, and attached to the ileum by a broad base, two or three inches from the cecum. Dr. Grant also removed the appendix, which was not particularly diseased. Discussed by Dr. Freeman.

Dr. Bonney reported two cases of **appendicitis**. (1) Young man taken ill in the night with pain. In the morning temperature and pulse were normal, no chill or vomiting, slight rigidity of muscles of right abdomen. Operated, appendix gangrenous. Discussed by Dr. Dixon. (2) A boy of eleven years, with symptoms similar to those of the above case, some nausea and rigidity, appendix much engorged. Discussed by Dr. Dixon. (3) A case of **facial erysipelas**, temperature 104° with systemic infection. The use of antistreptococcic serum was followed by a drop in temperature to normal with subsidence of the local symptoms in a few days. Discussed by Drs. Sewall, Freeman, Jayne and Edson.

Dr. Whitney reported four cases of **pneumonia in children**. (1) Child 15 months, temperature 103°, slight cough, with apex consolidation of one lung. It ran a course of six days. (2) Rales behind both bases, consolidation some days later. (3) Number of convulsions, temperature 104°, consolidation at base the size of a dollar. (4) Child sick two days, consolidation at both apices. Dr. Whitney emphasized the fact that pneumonia in children is often overlooked. Discussed by Drs. Bonney and Pershing.

Dr. Hall reported the case of a baby three days old, having had six hemorrhages from the stomach, about a drachm each time, unable

to retain food, and scabs appearing on the face thirty-six hours after birth. A provisional diagnosis of **hyperacidity and gastric ulcer** was made. Discussed by Dr. Sewall.

Dr. Delehanty reported a case of **exophthalmic goitre** treated with anti-thyroidin for three weeks, resulting in a drop in the pulse rate from 130 to 100, and causing a subsidence of the nervous symptoms. Loss of flesh was marked. Neck decreasing in size under the treatment. Discussed by Drs. Edson, Pershing, Taussig, Stevens, Hall, Craig and Grant.

Dr. Sewall reported a case of **pleuritic effusion** in both sides. The left, containing the larger quantity, was aspirated several times. Skiagraphs were shown illustrating the condition.

Dr. Stevens reported two cases of **purulent infection due to metastasis**. (1) Case of chorooiditis following puerperal septicaemia. (2) Eye-ball filled with pus, following keloid growths of the neck with suppuration. The case also had a gonorrheal history.

Dr. Davis reported a case of **pus in the anterior chamber** of the eye, following operation for cataract, an operation for empyema having been done just previously.

Dr. Beggs discussed the pathology of the case of anthracosis reported by Drs. Sewall and Wilder, considering the condition to be due to tuberculosis with fibroid changes, thus giving rise to the large masses shown in the specimen.

Dr. Gage reported a case of **enlargement of the bronchial glands** accompanied by great dyspnea and loss of sleep. Adrenalin chloride was used hypodermatically in doses of six minims, the dyspnea disappearing in two minutes after the first administration of adrenalin. Discussed by Drs. Hall and Whitney.

S. B. CHILDS, Secretary Pro Tem.

The Colorado Ophthalmological Society.—The January meeting of this Society occurred Saturday evening, January 21, 1905, at the office of Dr. W. C. Bane of Denver. Besides the exhibition and report of interesting cases and their discussion, Dr. J. A. Patterson of Colorado Springs read a paper on the **Relation of Nasal Diseases to Opacities in the Vitreous**.

DEATHS.

Dr. Edmund C. Purcell, a graduate of the Missouri Medical College of St. Louis, in the

class of 1887, died of acute disease at his residence, 4606 Josephine street, Denver, January 3rd. Dr. Purcell was born at Root, N. Y. He had practiced in Denver for 14 years. He was a member of the Medical Society of the City and County of Denver. He was prominent in the Masonic order and in the Woodmen of the World.

NEWS ITEMS.

Jewish Relief Society of Denver.—The annual meeting was held January 29th. The Society now owns a tract of 20 acres of land close to the city, and has about \$2,000 in its treasury. The officers are Drs. Philip Hilkowitz, president; C. D. Spivak, secretary, and Adolf Zederbaum, treasurer.

National Jewish Hospital for Consumptives.—The staff appointed for the year 1905 is as follows:

Medicine—Drs. John Elsner, W. N. Beggs, G. R. Feil, S. Simon, C. B. Van Zant, M. Kleiner, H. B. Whitney and H. W. McLauthlin.

Surgery—Drs. Leonard Freeman, John Boice, W. B. Craig and S. T. Brown.

Gynecology—Drs. H. G. Wetherill and Thomas H. Hawkins.

Obstetrics—Drs. T. M. Burns and J. C. Hutchinson.

Rhinology and Laryngology—Drs. J. H. Allen, Lorenzo Lockard and Robert Levy.

Neurology—Drs. H. T. Pershing and W. J. Rothwell.

Dermatology—Dr. James M. Blaine.

Dentistry—Dr. George Hartung.

St. Anthony's Hospital staff for the year 1905 has been selected as follows:

Medicine—L. E. Lemen, G. W. Miel, C. H. McLean and C. K. Fleming.

Gynecology—Thomas H. Hawkins.

Neurology—J. E. Courtney.

Ophthalmology—E. W. Stevens and G. F. Libby.

Laryngology—J. H. Allen and W. H. Davis.

Pediatrics—C. F. Shollenberger.

Pathology—H. R. McGraw and N. D. Gunn.

Alternates in Medicine—Philip Hilkowitz, D. W. Van Gilder, C. D. Richmond, DeForest Atwood, R. L. Thorp.

Alternates in Surgery—H. R. McGraw, A. L. Bennett, J. W. Purcell, M. R. Root, F. M. McCartney.

Assistants in Gynecology—Drs. F. M. Kindig, M. Hawes.

Consultants—Medicine: John Elsner, J. N. Hall, P. D. Rothwell, M. Kleiner, R. Albi and P. DeCunto. Neurology: J. W. Rothwell, A. McGugan. Obstetrics: W. H. Buchtel, T. M. Burns. Ophthalmology: Edward Jackson, Melville Black. Laryngology: Robert Levy.

Resident Physicians—J. J. Sarazine, J. L. Reynolds, M. J. Spence and M. J. Waldon.

The annual banquet given to the staff by the Sisters took place January 17th.

St. Joseph's Hospital staff for 1905:

Medicine—Drs. J. R. Arneill, J. B. Devlin, H. H. Martin and Alfred Seebass.

Surgery—Drs. Leonard Freeman, C. B. Lyman, W. B. Craig and I. B. Perkins.

Gynecology—Drs. W. S. Bagot and C. K. Fleming.

Obstetrics—T. J. Carlin and Edward Dean.

Pediatrics—P. V. Carlin and J. N. Hall.

Neurology—Edward Delehanty and S. D. Hopkins.

Eye and Ear—C. E. Walker and W. C. Bane.

Nose and Throat—F. E. Waxham and E. L. Foster.

Pathology—Dr. J. Wilder.

Roentgen Ray—G. H. Stover.

There were treated in this hospital last year about 1,500 cases.

The Denver County Hospital—The staff for the year 1905 has not been announced by the Health Commissioner; although the newspapers have published lists purporting to give information on the matter.

The class of nurses graduated from this institution, January 13th, numbered 19, making 159 who have received diplomas from the Training School of this Hospital.

Dr. W. E. Driscoll of Goldfield has been appointed county physician for Teller County.

BOOKS.

International Clinics.—Edited by A. O. J. Kelly, A. M., M. D. Vol. IV., Fourteenth series; cloth, \$2.00. Philadelphia. J. B. Lippincott Co. 1904.

Volume IV, closing the fourteenth series of International Clinics, opens with an article by Prof. Heym, of Paris, upon the "Excessive Use of Drugs in the Treatment of Chronic Disease, with Reference to Medicinal Intoxications." It is a subject that in these days of homeopathy, osteopathy, Christian Science, and other revolts against drug taking, the practitioners of medicine will do well to consider.

The other therapeutic articles deal with the Dechloridation Treatment, Radium for Lupus, Rodent Ulcer, and Epthelioma, and the Treatment of Patients Desperately Ill from Accident, Hemorrhage or Infection. The other departments are made up of Medicine, six articles; Surgery, seven; Gynecology and Neurology, each one; and Pathology, two. The illustrations include one colored plate, 48 other plates and about 15 figures and charts, etc., in the text.

Eye, Ear, Nose and Throat Nursing.—By. A. Edward Davis, A. M., M. D., and Beaman Douglass, M. D., Professors in the New York Post-Graduate Medical School and Hospital. With 32 illustrations. 334 pages. Cloth, \$1.25. F. A. Davis Company, Philadelphia.

The part treating of the nursing of the eye has been written by Dr. Davis, that on the nursing of the ear, nose and throat, by Dr. Douglass. The subjects are presented quite as freely and clearly as in any book of the kind that has yet appeared. It is very noticeable that the authors write from the standpoint of the physician rather than from that of the nurse. This has its advantages. The general practitioner can find here a great deal of assistance as to the details of managing these special cases with which he may be familiar. The nurse who is to take and carry out the physician's directions can profitably read a book which contains such directions in print.

Still such a book leaves much to be desired. Probably its authors expect this to be supplied by the two years in a special hospital which they strongly recommend. The omissions are perhaps less glaring in this book than in any of its predecessors. On the other hand it seems to have the common fault of introducing material that can be of little real value to the nurse. What does the nurse need to know of the specific forms of bacteria, such as the Koch-Weeks or Klebs-Loeffler bacilli, or about the experimental physiology of the ear, the endothelium of the Iris, or the organ of Corti? Such material, much of it, may add to the value of the book in the hands of the physician. But it can scarcely promote the efficiency of the nurse. From reading any book of this class, not especially this one, one is made to suspect that the writers have found their knowledge of the subject was not sufficient to fill a book of the size desired; and that such miscellaneous medical information had been introduced as padding. A good characteristic of the work

is that when different plans of nursing are in vogue, the author, while giving some account of these various methods, does not leave the reader in uncertainty as to which he prefers. The book is well printed and exceptionally free from errors. The illustrations are all of value and interest.

Practical Pediatrics.—A Manual of the Medical and Surgical Diseases of Infancy and Childhood. By Dr. E. Graetzer, Editor of the "Centralblatt Fur Kinderheilkunde." Authorized translation, with additions and notes, by Herman B. Sheffield, M. D., New York. Pages 556. Octavo. Flexible cloth, \$3.00. F. A. Davis Company, Philadelphia.

The idea aimed at in the preparation of this work was that of a reference book, its matter brief, to the point, and containing as many parenthetical hints as possible from which the reader might make his selections. It is wonderful how much has been crowded within its pages. A glance at its outside gives no idea of its comprehensiveness. The additions of the translator add materially to its value and practical utility for the American physician. The practitioner in search of therapeutic suggestions will find them not only on every page of part first, but also in especial departments devoted to *Materia Medica* and *Therapeutics*. Formulas are given with decimal proportions and the English weights and measures added in brackets.

The matter is generally arranged in short paragraphs, each with its appropriate heading. The plan of arrangement may seem somewhat confusing. For instance, *ophthalmia neonatorum* is treated under Diseases of the Newly Born, although there is a separate chapter for Diseases of the Eye. But a good index enables the reader to find quickly what he wants.

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When not otherwise stated the officers given below serve for the year 1905:

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American Medical Association

Next meeting at Portland, Oregon,
July 11-14, 1905.

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Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

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Boulder County, first Thursday in each month.....O. M. Gilbert, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County.....A. L. Hick, Delta
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, September and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, September and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Thursday in each month..E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. T. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month....C. W. DeLannoy, Telluride
Teller County.....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

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And its Constituent Societies.*

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Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

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COLORADO MEDICINE

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No. 3

NOTE AND COMMENT.

Papers on Appendicitis Operations.—

The prominence that discussions on appendicitis now enjoy in medical journals and in medical societies finds illustration in our present number. The fatal tendency of the disease, the suddenness with which its ravages are revealed to the patient's friends or the general public, although indications of its existence may long have been manifest to the patient, give it a sensational interest that commands attention.

It is now twenty years since Dr. Grant, guided by general principles of surgery, groped his way to the first appendectomy. While some questions regarding the operation may be regarded as pretty well settled, the divergence of view between the "radicals" and the "conservatives," as revealed in Dr. Wetherill's paper, is too great to exist without giving rise to earnest and even heated controversy.

Perhaps the most convincing evidence of the value of appendicitis operations will be found in the case histories collected by Dr. Perkins, showing what physicians want done for themselves when suffering from this disease. The facts thus brought together may also be effective in meeting the libel of the newspapers, which make a practice of heralding each death from appendicitis as a "death from operation." We cannot think that appendicitis will always claim the large place that it just now occupies in medical literature. But its temporary predominance is a necessary step in reaching sound, definite, and per-

manent views with regard to its proper management.

The Denver Academy of Medicine, with nearly one hundred Resident Fellows, has made an excellent start. All such institutions have seasons of depression and partial stagnation, as well as periods of rapid growth and especial vigor; but it has reached a stage of development from which there is no going backward. The profession of Denver will henceforth have access to its own medical library, and to current medical journals.

The library will grow just as fast as it can be taken care of. There is little difficulty in getting books, and books that are worth keeping. Even many of the newer books can be obtained without expense to the Academy. American journals can be secured without cost and the liberal gift of one of the Fellows has supplied the Academy with the best of the foreign journals. The difficulty will be to provide for the binding of journals. All journals worth keeping ought to be bound. If this can be done promptly at the completion of each volume it will cost little more than if delayed, and render the collection far more valuable.

The first scientific meeting brought out papers and discussions of interest. The report of it is crowded out of the present number, but will be given later.

The Fight Against Tuberculosis.—In our last number Dr. Solly explained the purposes of The National Association for the Study and Prevention of Tuberculosis. This organization, launched last year at Atlantic City, commands the services of the best known and representative physicians. There is another national organ-

ization called The American Anti-Tuberculosis League which is to meet at Atlanta, Georgia, April 17th to 19th.

But the fight against tuberculosis will not be very effective until it is carried into every city, town and district. It is not practicable to establish local organizations devoted entirely to this purpose. The work of leading the public in the effort to limit the ravages of tuberculosis may well be taken up by local medical societies. The Denver Academy of Medicine has already arranged for a meeting, to which the general public will be invited, to be held the evening of Friday, March 31st.

An Unexpected Compliment.—The excellence of the medical bill advocated by the Colorado State Medical Society, and the Colorado Medical Legislative League, is attested by the sincere flattery of imitation, on the part of the osteopaths. While their representatives are fighting the bill we published last month on the one hand, they are offering it altered to suit their special ideas and interests as the bill to "regulate the practice of osteopathy," etc., on the other. It may be a good bill for the osteopaths with their enmendations. It is a good bill for the medical profession and the whole people of the state without their changes.

The Medical Bill is now undergoing the process of amendment. Apparently legislators who are entirely ignorant of the needs of the case, even tho well-disposed toward such measures in general, find it easier to mutilate the bill presented for their consideration, and to argue in favor of their crude impressions, than to carefully study the needs and possibilities of the situation. Doctors have been known to do the same thing. While the medical bill is making fair progress, it is likely that final action will not be taken upon it when this number of COLORADO

MEDICINE reaches its readers. A postal card to each Senator from each doctor in his district will have an important influence upon the final decision regarding it. A bill is easily defeated if there be not enough pressure behind it to keep it well forward in the competition for attention.

Industrial Training for the Adult Blind.—Another bill of some medical interest now before the legislature is one to establish and maintain an Industrial Training School for the Adult Blind. The present state institution admits none over 21 years of age; and a larger number of persons become hopelessly blind after that age than before it. Furthermore the adult blind are more completely dependent upon special instruction than are blind children. Just as it is a wise policy to prevent disease and crime, rather than attempt to cure them, so it is better to give the blind man the instruction needed to make him self-supporting, rather than for the community to bear the burden of his support. The institution proposed is a training school, not a home. Institutions for the purpose are already established in 12 states and in the District of Columbia, but much more has been done for this class of defectives in some European countries.

The American Medical Association meeting in Portland this year (July 10-14), Western members have an especially good opportunity to attend it. Besides the shorter journey the railroad arrangements will be more liberal than when the meeting is held in the East. The regular summer excursion tickets to the Pacific coast will allow us to go early and stay as long as we choose, while special excursions from Portland will give a rare opportunity for seeing points of interest in the Northwest.

ORIGINAL PAPERS

CARE OF THE STUMP IN APPENDICITIS—TWO CASES OF INTEREST.

R. W. CORWIN, M. D., PUEBLO.

The First Case. Known to us only through the post-mortem.

The surgeons who operated (a skillful surgeon and one of much experience) informed me that the case was one uncomplicated and not difficult of operation. The patient did well until the fifth day. Up to that time he had had a normal pulse, no rise of temperature and complained of no pain or tenderness. Suddenly the reverse took place, the symptoms all became threatening, and on the sixth day the patient died.

The interesting part of this case was revealed at the post-mortem. The stump of the appendix at the time of the operation was tied with chromicized catgut; a purse-string suture, also of chromicized catgut, was taken in the cecum surrounding the appendix, and the stump invaginated or buried in the cecum and the latter closed over the stump.

The autopsy showed a moderate general peritonitis and a greatly distended colon. The distension of the colon had torn away the purse-string sutures, but the stump ligature was intact and holding firmly.

Second Case. This case we are glad to say was more fortunate and quite as interesting. The appendix was found buried in an inflammatory mass, and was freed and raised with considerable difficulty. The appendix was grasped near the colon with forceps and two purse-string sutures taken about it, in the cecum. The appendix was incised, invaginated and the first and second purse-

string sutures tied. The meso-appendix and surrounding peritoneum were treated in the usual manner. While the intestine was being returned into the abdominal cavity, which required no force, the stump reappeared at the junction of the meso-appendix and the cecum, protruding under the two rows of stitches at this point. It was not difficult to correct the trouble, but it illustrates what precautions are necessary in caring for the stump—and had the stump become exposed after the intestine had been returned into the abdominal cavity—how serious might have been the result, and the cause of the disturbance never suspected.

WHEN NOT TO OPERATE IN APPENDICITIS.

HORACE G. WETHERILL, M. D., DENVER.

The meeting of the American Medical Association in the city of Denver in 1898 marked the first serious breach in the ranks of the appendicitis radicals. Since then many have declined to accept the dictum of those who advocate operation as soon as the diagnosis is made, and the ranks of the conservatives have grown in strength and numbers from year to year.

Papers and discussions upon appendicitis have taken the tone and attitude of reason rather than ranting, and the scientific knowledge we have acquired is applied to surgical art in a way to produce the best results and the lowest mortality. Since that meeting the question has been "When to operate in appendicitis," but I am happy to be able to say that at last it is being narrowed down to even a more definite basis in determining precisely and accurately "When *not* to operate in appendicitis."

The discussion of this problem at the last meeting of the A. M. A. at Atlantic City was even more remarkable than that

in this city (Denver), for while the radicals held to their position, there was a strong sentiment of disapproval and dissent which was practically unanimous among the great leaders of the profession there represented.

Great good is accomplished in medicine and surgery whenever it becomes possible to establish such rules for the government of our practice as will allow of the least doubt as to just what had best be done and when. In my humble judgment this has now been done for appendicitis, and making due allowance for the relatively small number of cases in which an approximate determination of the stage of the disease can not be decided upon we have an excellent rule of action, which with no more than the fair quota of exceptions allowed all good rules, settles the vexed question "When not to operate in appendicitis." This rule is based on our scientific knowledge of bacteriology and infection, our experience with inflammation everywhere in the body and the necessity for absolute rest in its presence, and our comparative results in the treatment of the disease first by one plan and then by the other.

This rule was formulated by Dr. Ochsner at Atlantic City in his discussion of the subject. Speaking of the position of the radicals he said (I quote from memory): "We are agreed about all phases of this diseases but one. We agree that first day operations are ordinarily quite free from risk, that their results are good and that they should be done. We agree that circumscribed abscesses and encysted collections of pus may and should be evacuated, and that this also is a safe and wise procedure. We agree that the interval operation is almost devoid of mortality and that it should be done wherever possible. The class of cases in regard to which we do not agree is that intermediate one in which the appendix

has ruptured or become gangrenous or in which, through transmigration of bacteria through the damaged coats of the appendix, peritoneal infection of a more or less diffuse type has occurred and there exists a peritonitis of from two to ten days' duration. "This," said he, "is the class of cases in which those gentlemen get their mortality and it is the class which I decline to operate upon and in which the best results are secured by fasting, lavage, rest, and rectal feeding, and I should want to add the use of morphia or opium."

In this connection he reported the results of his last 1,000 cases of appendicitis seen during a period of thirty-three months, inclusive of even those practically moribund; and of these 1,000 cases there was a total mortality of only 2 2-10 per cent.

Compare this, if you please, with the best reported results of any of the radicals and you find their lowest to be from 13 to 15 per cent. mortality; and if the comparison were possible between the operative treatment and the non-operative in the intermediate peritonitis cases of two to ten days' duration, I am certain that the results would be appalling, and convincing beyond measure.

If these comparative figures are anywhere near to representing the facts, it means that the radical who operates more than five hundred cases in a year with more than 13 per cent. mortality, has more than fifty avoidable deaths to his credit during that year, that other and better methods would have prevented. It means that other surgeons who follow his practice and teaching have many more in comparison because they have not his skill and dexterity, and the advantage of his vast experience, and taken as a whole it means a fearful sacrifice of human life for which skill and name and reputation are but a poor justification.

Such a position is not tenable, and

when the profession and the public have a better understanding of the matter it must be abandoned, and as predicted by Dr. Ochsner, will be, regardless of the wishes of the radicals and of their being conscientious and having the courage of their convictions.

The first day, or before rupture of the appendix, the interval, and the encysted abscess stage constitute the proper time for operating, and answer the question When to operate in appendicitis.

When not to operate in appendicitis is now quite as clear. When we have learned to appreciate that the intermediate cases with more or less diffuse peritonitis are better left alone till abscess has formed or till the attack has subsided and an interval operation may be done, we will have learned that which will be the means of saving many human lives when practically applied in our work.

The statistics prove it, our experience with acute infections and inflammations elsewhere proves it, and our knowledge of the action of the leucocytes and phagocytes in the face of such an infection confirms the judgment. Ill-timed interference serves only to impair the conservative forces of nature through destroying and removing her defenders and opening up new areas for infection and absorption. The leucocytes and phagocytes destroy the infective bacteria if left alone; and the adhesions, exudations and lymph wall in, quarantine and limit the spread of the disease if not prevented from doing so by foods and purges which keep up peristalsis and promote diffusion and the filling of the abdominal cavity with fecal material, if there be a perforated appendix.

I was once asked to see a lady only to find her moribund and dying on reaching her bedside. She had been ill a little less than four days. The necropsy showed a gangrenous and perforated appendix con-

taining a large concretion, and a belly full of fecal matter from the small intestine, which had been purged through the perforation by calomel and podophyllin. Fasting, lavage, no purges and opium would have promoted the limiting of the process in this instance, prevented the extravasation of this large quantity of fecal matter and favored matting of the intestines over and about the perforation. An encysted abscess would have formed which might have been opened by a simple operation on about the seventh to the tenth day. These cases are so like typhoid perforations that they should be treated in the same way, that is always operated upon within the first 24 or 48 hours whenever possible; after that time has elapsed since the symptoms indicated perforation the expectant plan is far better and will save more lives.

It is easy to anticipate that the objection will be raised that it is impossible to make an exact diagnosis of the conditions within the belly and that no man can tell whether he will find a perforated or a gangrenous appendix in any given case, and so operation should be done to find out. Here is the very factor of error to which allusion was made earlier in this paper, and there is no doubt whatever that in many instances it is impossible to foretell the condition of the appendix before operation. It must be conceded, too, that it is impossible to fix an infallible hard and fast rule as to the time after the beginning of the attack when operation may be safely and successfully done.

Fortunately, however, neither of these things are necessary. The thing to be determined as nearly as possible is this: Is there a more or less diffuse peritoneal infection and inflammation; if so, of about how long standing? While it may be impossible to answer even these questions correctly every time it will be possible to reach a correct conclusion in the

vast majority of the cases; and in any event we can ordinarily determine whether the disease is still in a safely operable stage or whether it should be treated expectantly.

The onset and course of the attack and the day of the disease help us enormously in the determination of these matters, it being fair to presume that sudden onset with very severe pain and collapse indicates perforation or gangrene of the appendix; and the elapsed time since the attack helps to determine the degree and stage of the incident peritonitis. If the patient has been freely purged after the symptoms of perforation develop we should expect to find fecal extravasation. All of these things help to form a judgment as to whether the patient should be operated upon and when.

I should make one stipulation, however, in any case of uncertainty, that is, when in doubt, *don't operate*. The adoption of this rule by the profession as a whole will save many lives. When we have all mastered the details of the fasting, lavage, no purge treatment, our patients may be safely operated upon in the interval, and the unnecessary deaths of intermediate operations avoided.

That this differential diagnosis may be made, and is made, and the time *not to operate* in appendicitis be determined, is best shown by the results of Ochsner's work and his 2 2-10 per cent. mortality. This is an unanswerable argument, and no amount of carping criticism and inuendo will serve to overcome it.

There can be no real doubt that the period from the third to the tenth day is ordinarily the time of greatest danger for operations for appendicitis. Even though no fixed time in days and hours may be positively set it is true, notwithstanding, that under ordinary circumstances this is the time *not to operate*. There is another time not to operate in appendicitis, and

that is when the patient is apparently about to die. No good and much harm to the cause of surgery and humanity may be done thereby.

COMPLICATIONS AND SEQUELS OF APPENDICITIS.

W. W. GRANT, M. D., DENVER.

The great prevalence of appendicitis—at times it would seem seasonal or periodical—and the death rate from it, show conclusively that the last word has not been said, notwithstanding the voluminous literature of the subject. A few general considerations may be appropriate to the occasion. It was more common than usual last winter, both here where the season was warmer than usual, and in the East and Middle West, where it was colder. There can be no question that the dietetic habits of the people and impure foods have a most important etiological relation to the disease. In this connection canned and adulterated foods should receive more serious consideration at the hands of the profession, the public and the lawmakers. Manufactured foods are consumed in larger quantities than ever before, and their preparation should be under capable medical supervision. Chronic indigestion with constipation and distention of the intestines from fecal matter and gas, with micro-organisms, are among the many causes which contribute to the condition, and must continue to excite interest and investigation until more definite facts and principles have been formulated. Eccles says all cases are due to infection. As early as 1827 Melier wrote a most interesting memoir on the subject, reporting eight cases, all of which, with one exception died in a week, the post-mortem in each case revealing the now well-known pathologic conditions. Dr. Joseph Manley of

New York reproduced this instructive paper in the *New York Medical Record*, July 19, 1902. In view of the treatment and results in those cases I hardly think that Manley's dictum that "there has been essentially no advance in the pathology of the disease, or a more rational conception of its treatment," fair or just, or consistent with present operative results, nor his views as to immunity. Neither would it be wise to accept it—as Melier only hoped and expected to see the day when "well circumscribed cases might be cured by operation." As the majority of cases reveal no tumor, and exceedingly few present any such evidence in the first twenty-four hours, which is the most important diagnostic period, the mortality under such practice would increase rather than diminish. Whoever waits for a well-defined tumor on palpation to determine the diagnosis or operation, will often wait for the undertaker to formulate his conclusions. When the organ is entirely post-cecal no tumor will be felt, in the early period, nor when it is pendent in or near the vesico-rectal pouch, except per rectum after perforation has probably occurred. Nor can palpation reveal anything as to the internal condition when the abdominal walls are rigid from perforation, and little when the appendix is entirely retro-colic, except as an aid in localizing tenderness. The complications of this disease increase with ever-widening knowledge and experience. A case is simple when, in the acute stage, perforation or gangrene has not occurred. Abscess, even though it is circumscribed, is a complication as well as a result. Gangrene is a common complication and may occur in a short time, though more frequently due to delay. In such a case the ideal treatment cannot be carried out. Dieulafoy particularly has shown the close relation between appendicitis and cholecystitis, both as a complication and a sequel. The

retro-cecal cases, says Dieulafoy, are more particularly prone to be followed by abscess of the liver, the pus burrowing behind the liver, and sometimes perforating the diaphragm and lung. I have seen one case of left subdiaphragmatic abscess as a sequel. A girl of seven years of age, Davenport, Iowa, was operated on by me for a retro-colic abscess of the appendix in 1886 by an incision over the most prominent part above the iliac crest and the ascending colon, with a second opening for drainage in the loin, no effort being made to find the appendix. She recovered in a few weeks and soon after moved with the family to Kansas. In April, 1900, this patient, now a young married woman, came to me from Leadville with the following history: A year after the first operation she fell from a horse and not long after a swelling, pointing at the umbilicus, appeared and broke, discharging pus for several months; no operation. This I believe was an infective cholecystitis due in all probability to the former appendicitis. In 1899 this patient married a railway engineer and moved to Leadville. In the fall she had an abscess in the left hypogastrium, which was incised just within the anterior superior spinous process of the ilium by Dr. Sol Kahn of Leadville. Continuing to discharge for several months, she came to Denver and was placed in my care. The opening had momentarily closed, the abscess refilled and extended from crest of ilium to the costal arch. It was opened, giving exit to a large quantity of very offensive pus. At this time she was expectorating freely offensive mucorpurulent material. This was recent and had not been preceded by pneumonia or pleurisy. Examination revealed what I considered an abscess of lower lobe of left lung. In a few days the patient was given an anæsthetic, with a view of ascertaining the origin of the abscess. With a long flex-

ible sound I traced the pus track from the opening below, over the sigmoid, in a straight line between the muscles and peritoneum to the costal arch. I made an incision at this point and with the finger opened the fistulous tract to, if not through the diaphragm, when it turned abruptly downward and obliquely to the right. I inserted a rubber drainage tube to the depth of four or five inches and irrigated daily. Cough soon ceased and in two or three months the patient recovered and at last accounts, a year after, she was quite well. This was, I believe, an abscess of the left lobe of the liver which perforated the diaphragm and invaded the left abdominal wall. She has never been strong and vigorous since the first attack, when a retro-colic abscess was opened by me in 1886. This remarkable history dates from that time.

I have so frequently observed two phenomena when the appendix is entirely in the retro-colic fossa, and, in consequence, the inflammation and pus following different lines from the ordinary cases, that I can but regard them as of some diagnostic significance, especially in the gangrenous and suppurative, the delayed cases; one a tender point about three inches to the right of the umbilicus on a horizontal line from it, and more sensitive than the McBurney point, in these particular cases, and some two or three inches above it; the other, an infection of the glands of the neck, including the parotid. I cannot recall that I have seen these symptoms or results when the appendix is not so situated and the abscess points in other directions. There was no other glandular involvement, though in one case which I saw in consultation six months ago, no operation being permitted, the post-mortem showed enlargement of some of the mesenteric glands in the vicinity of the appendix. No tuberculosis or other disease in any of the cases. In the absence

of a palpable tumor and of marked tenderness of the McBurney point, with an ordinary fleshy abdomen, the diagnosis is not so readily made by the physician in these cases, nor sometimes by the surgeon; consequently there is more than ordinary delay in applying the most rational treatment. If this abscess is not evacuated and drained by incision, it is more likely, than all others, to rupture into the cecum or colon. If not, the patient will gradually die from general sepsis, and not from general peritonitis—the usual cause of death from appendicitis.

Now, it is known that gall bladder and liver complications and sequels are not uncommon in appendicitis.

In 86 deaths from appendicitis which were reported the past year from the Boston City, Johns Hopkins, and Rhode Island Hospitals, there were subphrenic abscesses in eight. Deaver reports four involving the lungs. Darling reports left sided subphrenic abscess after convalescence from appendicitis. These organs and parts may become involved by extra or intra-peritoneal extension, general peritonitis or embolic infection.

In the *Annals of Surgery*, May, 1901. Meyer has an interesting article on "Rare Complications in Appendicitis," referring to phlebitis and late intestinal obstruction. Iliac, femoral and crural phlebitis, with thrombosis, are observed with sufficient frequency to have excited much interest in the past three years. There is a difference of opinion as to the cause. Meyer quotes Lennander of Upsala as to lessened vascular tension, and in opposition to infection. Secord of Ontario, in the October issue (1903) of *American Gynecology*, quotes Schenck & Strauch along the same lines, while Meyer, Coe and Welch, particularly, believe in an infective origin. These complications more frequently occur late, about two weeks after operation. I recently saw, in consultation,

a case of femoral thrombosis of the right leg, in acute appendicitis on the second day, the man having had pulmonary tuberculosis for several years. He was fleshy and his general condition seemed very good. In February, 1901, I operated on a young woman of 30 for acute gangrenous appendicitis. On account of the bad local condition I felt it wise to drain the stump. There was some supuration, but her progress was entirely satisfactory for two weeks, when phlebitis of a mild character occurred in the legs, commencing in the groin. There was only moderate swelling, showing at least that there was not complete obstruction of the femoral vein. It delayed her convalescence, and for months after the limbs would be painful, attended with swelling. During this time she was anemic, as such patients usually are.

Gerster reports cases of septic thrombosis of the root of the portal vein, and says appendicitis is the most common cause. Lockwood says that in phlebitis and thrombosis in appendicitis the prognosis is favorable provided it is not complicated with sepsis.

I have never seen a case of iliac, femoral or crural phlebitis after an abdominal, rectal or genito-urinary operation, that was not due, in my opinion, to infection. Sepsis is the most rational cause, even if the operative field does not at times seem to justify it. The removal of tension and pressure in weak subjects favors thrombosis, especially in dependent parts, but without sepsis the occurrence is unusual. Intestinal occlusion or obstruction from septic peritonitis is not an uncommon complication or sequel of appendicitis. The common causes are a long and adherent appendix constricting a coil of the ileum, intestinal adhesions from perforation and abscess, inflammatory omental adhesions, kinking and strangling of the intestines, and sepsis,

which produces intestinal paralysis. Peristalsis and absorption of gases ceases and meteorism and vomiting results. There is no more dangerous condition to the patient nor a more difficult and anxious one for the surgeon. The acute and subacute forms specially interest us. About 90 per cent., it is stated, occur in the small intestine and the great majority in the ileum. Hearn, of Philadelphia, in March, 1904, *Annals of Surgery*, reports cases of subacute obstruction and says the diagnosis is more difficult and the prognosis more unfavorable than in the acute form. In the latter, the occurrence is more sudden—the stoppage of peristalsis, gas and fecal matter, distention and vomiting, the latter becoming fecal, with acceleration of pulse and rising temperature, leave no doubt as to the condition and little as to the treatment to be applied. While in subacute obstruction the progress is gradual, there is little pain or distention, vomiting not severe nor fecal, until late, and no unevenness of contour of the abdomen, and gas and fecal matter even, may pass without much difficulty. I recently had such a case after operation for acute appendicitis.

J. H. S., aged 35, tubercular, having had two hemorrhages two or three years ago, and always suffered from indigestion; weight 110 pounds; operation 28 hours from mild onset. The only significant incident of the operation, which was done easily and quickly, was the adhesion of a band of omentum to the middle of the appendix. The omentum was ligated and dropped back. The organ was excised and stump pouched. On the distal side of the kink produced by the adhesion the appendix was distended with pus but perforation had not occurred and the wound was closed without drainage. There was nothing eventful in the next few days, except a burning pain at the pit of the stomach, which, he said, was not

unusual to him and for which he insisted on a hypodermic of codeia, which was given; temperature and pulse normal with exception of short intervals after fourth day, when it would be $97\frac{1}{2}$ for short periods. On the third day he was given at intervals, three $\frac{1}{4}$ gr. doses of calomel and soda; on the morning of the 4th his bowels moved freely three times, and again, once, on the fifth day. The pain at the epigastrium continued at intervals, but no bowel pain or distention, and gas passed quite freely until the sixth day. He continued to vomit occasionally, notwithstanding the bowel movements and absence of all pain except of stomach, with no distention, and the wound and vicinity of operation perfectly comfortable, in good condition, and no indication of peritonitis or sepsis. Frequent conferences with surgeons, Rogers and Craig, elicited no belief in the existence of obstruction, though it was considered; and no satisfactory explanation of the stomach, irritability, though considered lightly by the patient, who was himself a surgeon, and accustomed to treat himself for stomach disturbance. On the seventh night after operation fecal vomiting occurred and it was manifest that obstruction was complete. There was only moderate distention. His heart, which had exhibited no weakness heretofore, was now fast and weak and the patient in collapse. General anesthesia was not seriously considered, but with Drs. E. J. A. Rogers and W. B. Craig advising, the wound was opened under chloride of ethyl, and was found in excellent condition. No adhesions in sight, and no pus, but small intestines distended and congested. A loop of the ileum was fastened in the wound, incised and drained, and the patient returned to his bed. Salt infusions were given before and after, but he did not rally and died on the following morning, the ninth day after operation.

I had expressed the opinion that the cause of obstruction was omental strangulation of the intestine in the vicinity of that which was adherent to the appendix. Post-mortem revealed strangulation of a coil of ileum by omentum, near the cecum; and also the same band of omentum, with a fixed point below, had produced a kink by traction on the transverse colon, and obstruction at that point in consequence. This probably had something to do with the pain in the stomach.

Gibson's statistics show a mortality of nearly 50 per cent. in operations for intestinal obstruction, Kocher's about 40 per cent. When the operation is promptly done in acute obstructions, the condition of the patient is better, and the result consequently more promising. Had the evidence of partial obstruction in the above case been at all satisfactory or evident, an early secondary operation would probably have saved his life.

Hotchkiss and Brewer of New York each report a case in the April number of *Annals of Surgery*, of late obstruction, one, two weeks after operation for appendiceal abscess, from kinking due to intestinal adhesion, the other one year after appendectomy, a constriction of the ileum by a fibrous band due to the appendicitis.

The most common complication is septic peritonitis. It is the common cause of death. It is due to gangrene, perforation and ruptured abscess, the extravasation of infected bacteria into the peritoneal cavity, and this is the chief cause of that dangerous and most difficult complication to deal with—intestinal paralysis.

Inflammation of the ovary and pus tube are not uncommonly associated with appendicitis, and when not, an acute differential diagnosis is often to be determined. In operations upon women for either, the association and relation of cause and effect must always be considered. Edward Ricketts claims that the puerperal state is

not an infrequent complication, while it is also common to pregnancy.

Ulcerative colitis may co-exist and is sometimes mistaken for appendicitis. Careful consideration of the history and localization of the tenderness will enable one to meet the respective indications and treatment. It is sometimes complicated with typhoid fever, and sometimes mistaken for it. Perforation in each case is attended by the same symptoms and results, but the beginning and history of each case is so different that no mistake need be made in properly estimating and treating them. Both require prompt surgical treatment.

There is one complication common to all abdominal operations, a thick, fat belly wall. It renders examination of contents and handling and manipulation of viscera more difficult in all positions. A longer incision is an absolute necessity. Hernia is more common in these cases, and the integrity of the wall more difficult to preserve on account of fat necrosis, which is common.

Fowler and Dieulafoy report cases of black vomit in perforative and gangrenous cases due to septic thrombi and embolism in the wall of the stomach. These, like the cases of septic thrombi of the portal vein, are fatal.

The disease is frequently associated with tuberculosis, but I do not believe tuberculous subjects have any special predisposition to the disease.

The two most common sequels of appendicitis are fecal fistula and ventral hernia—both due to gangrenous, perforative and abscess cases, which have to be treated by drainage. The latter measure is always a menace to the preservation of a good and strong abdominal wall, and it should be maintained for as short a period as possible.

TREATMENT.

How should these complications and results be treated? All of them are unfortunate, some of them fatal, and most of them preventable. Yet in the absence of uniform principles and methods of consideration and treatment, and the accidents and imperfections common to every art, we will still meet them, but with growing infrequency. General peritonitis due to the colon bacillus or streptococcus infection was a few years ago regarded as necessarily fatal, and little effort was made, consequently, to arrest its progress. Gradually by early and more scientific effort good results are now often obtained. Either at the time of operation, or soon after, this condition can only be successfully combatted by free incision, breaking up adhesions, evacuating pockets of pus, cleaning the general cavity by mopping and irrigation, and then draining with gauze or tubes. In intestinal paralysis it is useless to give cathartics and enemas, though the latter may be tried. They will not produce peristalsis, and high enemas will only increase the distention. Stomach lavage may do some good, and should be used. The condition is best met by enterostomy and drainage, putting a tube in both ends of the intestine. It is preferable to open the wound and fix a loop of the small intestine in it, and then incise it. If this is done before the patient is exhausted by sepsis, recovery may ensue. Lunt of Boston has reported several such cases. I cured one four days after operation for appendicitis by aspirating the transverse colon and evacuating an enormous quantity of gas and a great deal of liquid fecal matter. I have no experience with eserin and alum injections to induce peristalsis in these cases. In obstruction there will be fecal vomiting, distention and "incarceration shock." The latter should be treated with

salt infusion, adrenalin and strychnine, and abdominal section performed as quickly as possible, and the cause removed, usually an adhesion kink, or strangulation by a band or volvulus.

Phlebitis usually obstructing the vessels of the lower extremities is treated by absolute rest and supporting measures. These cases usually recover, but the convalescence is prolonged. The severer cases transmitting emboli to the viscera are more dangerous and often fatal.

In the puerperal state the appendicitis is likely to be aggravated. This is no contraindication to the operation, and the disease should be treated on usual principles. If it should be deemed an operative case, it would seem reasonable that it should be done with the least possible delay on account of the congestion and possible pathology of the puerperal state. In the pregnant state the same rule should prevail. In the early months miscarriage sometimes results, but this is not a very dangerous sequel and should not interfere with the most radical treatment of the appendix. If it is removed early, before pathological complications ensue, miscarriage is less probable. In pyosalpinx and ovarian degeneration these appendages should be removed with the appendix, and in such cases the incision should be made to the right of the rectus abdominis, as this affords better access to the entire field.

Pus in the belly does not necessarily mean that septic peritonitis exists. Small circumscribed abscesses limit the peritonitis and infection. Odorless seropus is not so virulent. It often gravitates to the uterine or bladder pouch, and if well cleaned out with a dilute solution of peroxide of hydrogen, followed by normal salt solution, drainage will often be needed only 24 or 36 hours, if at all. In such cases results are often as satisfactory as

operation before perforation of the appendix.

Fecal fistulae may be expected if abscess and gangrene, with or without perforation, has affected the caput coli. With drainage the fistula will usually close in a few weeks, sometimes in much less time, without further operation. For circumscribed abscess not involving the peritoneal cavity, which is protected by an adhesion wall, simple incision and drainage is the safest procedure and will generally cure these patients. If the appendix is easily exposed or found, it should be removed; but I do not believe it is the best surgical procedure to sever adhesions and open the peritoneal cavity in this effort at this *particular* time. It is taking an unnecessary risk of infecting the peritoneal cavity. If a resulting fistula should not close in a short time, there can be no objection to a secondary operation, under more favorable auspices, for its closure, or for the removal of the appendix.

On April 6th I operated on a boy of twelve on the day of his arrival after a painful ride in a wagon of 100 miles, and the eleventh day of illness. There seemed a large tumor, which proved to be violent contraction of the psoas and iliac muscles from reflex irritation due to rough usage. The appendix was greatly enlarged, full of pus, soft and gangrenous. The cavity was thoroughly protected with gauze. The meso-appendix was too soft to apply a ligature and was divided by finger pressure. The appendix was ligated close to the cecum with coarse ligature to prevent cutting through too quickly. The stump could not be pouched because the sutures would cut the cecal wall as soon as tension was made. The parts were thoroughly cleaned and the stump drained with iodoform gauze, which was replaced with tubes on the

third day. This was a late operation in an acute gangrenous case, and the local conditions favorable to fistula and also phlebitis. The former, of few days' duration, resulted. Recovery prompt.

Hernia as a result of drainage can only be cured by excision of scar tissue, sewing the divided muscles, and especially uniting the fascia well, over all. On account of the danger of fat necrosis in thick belly walls, I have for several years in many abdominal operations in such subjects, drained the fat space. After uniting peritoneum, muscles and fascia in separate layers, the two latter with chromicised catgut, a rubber drainage tube the length of the incision is inserted between fascia and skin, and fixed by a stitch in the lower angle of the wound. The skin is united by a single subcuticular stitch of silkworm gut. The tube is removed in three or four days and the fat continues to discharge in steadily decreasing quantity for a few days or a week, but seldom requires irrigating, unless on the second day to insure a patent tube, for there is no infection but, after the first day, only pure fat without a particle of pus or odor. Stitch abscess never occurs. Since resorting to this method, I have never had a wound break down, and there is greater security against hernia. Some fat walls are much more vascular than others, and consequently necrosis is less liable to occur, but the practice is so simple, safe and effective that I cordially commend its general use in such subjects.

This is a brief summary of the more important complications and sequels of appendicitis. How are they to be prevented? There is no more important consideration than this. The mortality has been steadily reduced under improved medical and, especially, more decisive surgical treatment in recent years. Every fatal case was admittedly surgical at some stage of its history, when life could, with

few exceptions, have been saved.

In 1827 Melier said: "If it were possible to establish an early and definite diagnosis in well circumscribed cases, one can conceive of the possibility of relieving them by an operation." He thought the time would come. He was much more in advance of his time than Hemmeter in 1903, who said: "The operation should be considered when signs and symptoms indicate suppuration," and yet he considers it so much of a surgical disease that he would have a surgeon associated in every case. Whoever waits for those "signs" and "symptoms" will too often delay until too late. Not by such indications and practice has the mortality been reduced. Statistics are so misleading as to be of little value in deducing conclusions in the absence of uniform opinions and the work of different operators. From them mortality varies from one per cent. in the chronic to twenty-one per cent. in the acute, by American operators, some times as low as four or five in the acute, depending upon the time of operation chiefly. We are quite familiar with the opinions of our countrymen and it is not necessary to quote them extensively. Hemmeter quotes MacDougall, a distinguished Scotch surgeon, as saying that "the tendency to recurrence or relapse is greater than formerly." If this is true, it means that the agencies which produce it are more active and virulent.

Sonnenburg says: "Operation in the acute attack will never become popular on account of its great difficulty." This statement can only be reconciled with our practice and results, on the confident assumption that he is not familiar with the operation in the first 24 or 36 hours; for it is as a rule of the simplest kind at this time.

Dieulafoy says that "the only way of

avoiding serious operative complications, due to septic intoxication, is by early operation."

Champonniere says "the danger of a fatal infection from leaving an inflamed appendix, is greater than that of disseminating the infection at the time of early operation."

These two statements are as pointed and forceful as the early operative advocates of our country. I believe them unanswerable. The starvation, or stomach rest treatment, now so popular, fully meets the views and purposes of the timid, who apply it to all stages, while it is only intended for a certain class who have passed the early operative period before a good surgeon has had an opportunity to operate. Its abuse is killing some who might otherwise have been saved. It is intended by Ochsner to apply to a class of whom Maurice Richardson once said in classic phraseology, "it is too late for an early operation, and too early for a late one."

Hemmeter says the simple catarrhal and ulcerative cases do not require operation, but the perforative and gangrenous do. The weakness of this statement lies in the fact that neither he, nor any other writer is able to discriminate and to say with any assurance that the pathological process will be arrested at this stage. Furthermore, the extremely advanced pathological condition so frequently observed within twenty-four hours from the beginning of the acute manifestation, indicates that a mild subacute or chronic catarrh or diseased state *preceded* it. Observation and investigation of the history of cases tends to confirm this opinion. Few if any cases are originally acute. The fulminant cases were once mild and distinctly curative. It is the simple so-called non-operative case which makes the perforative, the gangrenous, the fatal case. There are no distinctive symptoms by

which one can separate and determine which will pursue a mild and which a severe course. It is a matter of common observation that seemingly mild cases, promising early recovery, very suddenly or unexpectedly become worse, necessitating a hurried operation, and the still too frequent visitation of the gravedigger, for whose coming the surgeon is held responsible, while he is, in fact, but the innocent instrument of erroneous opinion and needless delays. Those who die with operative intervention would have died without it. The time has come when no one should view it as a *last*, but as a *necessary* resort, the earlier the better; and when this growing belief is deep rooted in the professional mind, the lessening mortality will become as nearly ideal as human imperfections will permit. If, therefore, the simple catarrhal cases, with the interval, severe and acute, should be subjected to immediate operation, the mortality can be reduced to two or three per cent. and dangerous complications at the same degree. Ideal conditions can never be expected, but with substantially uniform views as to pathology, etiology and treatment, the present mortality should be reduced very materially.

If there is no opportunity to operate in the most favorable period of the acute attack, the first 24 or 36 hours, and the inflammation is steadily progressive, then it is often best to nourish lightly by rectal enemas, rest the stomach and maintain perfect quiet of the patient, in the hope of arresting peristalsis, inflammation and infection, deferring operation to a more favorable period. But this rule of conduct is followed too indiscriminately, and consequently is fraught with danger. If perforation has already occurred, further delay in operating is often fatal. The treatment may limit the infection to a circumscribed abscess by adhesions, but it is, at best, a condition of grave uncertainty, and

a severe trial to the surgeon, who halts between hope and fear. The result is, at times, gratifying, in a late successful operation, while in another disappointment and vain regrets will be his share. The situation demands the exercise of unusual acumen and the best possible judgment.

Some of the interval cases, after severe attacks, are attended with quite as many risks as the acute, provided the latter are operated on early and promptly. No one should ever be permitted to have a second attack when it is possible to avoid it. The anticipated interval is, too frequently, not realized, but when it is, there should be as little delay as possible in removing the appendix. Otherwise a life of anxiety, fear and unrest is, like the sword of Damocles, the fate of all, once the victim of this disease.

EARLY DIAGNOSIS AND TREATMENT OF APPENDICITIS, WITH PERSONAL REPORT FROM ONE HUNDRED PHYSICIANS WHO HAVE SUFFERED FROM THE DISEASE.

I. B. PERKINS, M. D., DENVER.

So much valuable material has been received in collecting these reports that I shall give you now a brief synopsis only, of the paper and of the first one hundred reports as they came in, and will reserve the reports in full, together with others that came in later, to be published in a monograph to appear in a short time. Many of these reports are very interesting and will, it is hoped, prove of value by aiding in the earlier diagnosis and in the application of the proper remedy at a time when the best results may reasonably be expected.

In reviewing the literature on appendicitis one finds that a great deal has been

written on the treatment of the disease, but that very little, comparatively speaking, has been said on the side of diagnosis, and especially is this true in regard to the early diagnosis.

"The best time to operate," "The necessity for early operation," "The disastrous results of delayed operation," "Appendicitis a surgical diseases," "The medical treatment of appendicitis," etc. These and many other similar titles to well written articles have appeared in the literature from time to time and have been discussed pro and con by the advocates of the different theories and methods of treatment.

The profession is now almost a unit as to the pathology of the disease in its different stages, as well as to the best method of treatment in the early stages. This knowledge has been gained from our being able to place the clinical bed side picture of the case side by side with the picture seen on the operating table. In no other way could our present understanding of the disease have been brought about. Autopsies oftentimes give little or no idea of the conditions present at the onset of the disease. They give only a view of the wreck at the end of a long and constantly changing pathological condition.

The early symptoms are of the greatest importance, and our ideas of the early symptoms have changed materially as our knowledge of the disease has progressed. Each year we have gotten nearer to the beginning of the attack and have come closer together in our ideas and practices in reference to diagnosis and treatment.

A few years ago the family physician looked for chills, a tumor in the right lower abdomen, marked rigidity of the muscles, tympanites, high temperature, much pain and a rapid pulse, before he considered that the symptoms were sufficiently indicative of appendicitis to justify him in even calling counsel.

Advice as to operation has been too frequently withheld until it was plain to see that the only possibility for recovery lay in this line of action. In this stage failure must often attend the most earnest efforts of the surgeon, and a high mortality rate must be expected.

A case presenting typical symptoms of almost any disease can usually be diagnosed and a fairly accurate prognosis given whether the physician has had large clinical experience in that class of cases or not, but in appendicitis often those of largest experience are unable to say in the beginning of an attack whether a given case will be apt to run a mild course and result in resolution or whether in a few hours the gravest symptoms of the disease may not be present. Each surgeon has seen his mortality rate become gratifyingly less in direct proportion to the action of his clientele in referring their cases for early operation. Early operation should be advised in practically every case and would save practically all cases of appendicitis, just as is the case in cancer of the uterus or breast, ulcer of the stomach, and gall stones or inflammation of the gall bladder.

We should not confine ourselves to the necessity alone for saving life before advising operation, but should operate as readily in chronic or interval appendix cases as we do in hernia, ovarian cyst, fibroid tumor, etc. There are many reasons for operating which are quite sufficient besides those which immediately endanger the patient's life.

Almost every physician finding a cyst of the ovary, a hernia, or a fibroid of the uterus will, and should, at once advise operation. Frequently not on account of present discomfort, but more on account of future probabilities, together with a desire to relieve the patient of anxiety as to possible future dangers. An interval or chronic appendix case presents an as-

pect far more serious than either of the above mentioned conditions. Why not make it a rule to advise operation in all chronic and interval appendix cases where there is no condition present to contraindicate an operation, the same as we do in the above pathological conditions? In this way many lives would be saved and the patients would be spared annoying sequelæ and much anxiety and fear as to future danger.

Of course, the surroundings, hospital facilities and the personal equation of the operator must all be considered. The action in each case must be taken because of well founded reasons and at a time and place where the best chances for life may be given each individual case.

It occurred to the writer that if we could get at the prevailing early symptoms in a large number of cases and have these symptoms reported from a source that could be relied upon, we might derive much benefit from the study.

After having suffered from the disease myself I found that my ideas as to the early symptoms of an attack were much more definite than they had previously been, as well as my ideas of premonitory symptoms. With this thought I decided to get personal reports from physicians who had suffered from the disease and to see whether or not the premonitory and early symptoms in their cases corresponded to those in my own.

It would appear that the medical man who has suffered from appendicitis would be the best witness as to the early symptoms, at least in his own case, and if there prevails anything like a concert of opinion among physicians who have had the disease this opinion would surely be of more value than opinions gathered from the laity or those gathered from the surgeon, or from the physician. It was desirable also to learn how many surgeons agree on given points in relation to appendicitis.

and also how nearly the opinions of the medical man agree with those of the surgeon.

Letters were sent to 250 surgeons in the United States asking them to send names and addresses of any physicians whom they had attended or operated for appendicitis. With this letter was sent a blank to be filled out by the surgeon, asking him: First, What symptom or symptoms in the early stages of appendicitis do you consider most to be relied upon for a diagnosis? Second, Can a diagnosis in your opinion usually be made within the first 24 hours? Third, Getting a case of appendicitis within 24 to 36 hours of the onset of the attack, the patient being in good condition otherwise, would you usually recommend operation? Fourth, If not, in what cases would you operate and in what cases would you refuse to operate? Fifth, Do you advise operation in chronic and interval cases? Sixth, What, if any, medical treatment do you consider should be tried before resorting to operation?

In reply to these letters more than 100 answers to the inquiry sheet were received within the time desired, and something over 200 names and addresses of physicians who had suffered from the disease. A number of surgeons had never attended a physician for appendicitis and many others were away from home at the time and did not receive the letter in time to furnish the information for this paper. A letter was then sent to each of the physicians who had suffered from appendicitis, accompanied by a blank having the following questions to be filled out and returned.

Second. Give early symptoms in each attack? (a) Premonitory? (b) At beginning of attack?

Third. Were you operated? Do you expect to be?

Fourth. Was drainage used?

Fifth. Give treatment in any attacks not operated?

Sixth. Mention any sequelæ in your case?

Seventh. Do you advise early operation?

Eighth. What, if any, medical treatment do you consider should be tried before resorting to operation?

Ninth. Can a diagnosis, in your opinion, usually be made within the first 24 hours?

Tenth. Give a brief report of your case with any points of interest in reference to diagnosis and treatment which you have gained by your personal experience?

In response to these letters came answers to more than 100, and I submit for your consideration these reports as well as the answers given by the one hundred surgeons to the questions addressed to them.

The writer has long held the opinion that physicians and surgeons most experienced in appendicitis were largely in favor of operating early in the attack, and of operating practically all chronic and interval cases.

In this connection I wish to refer to a paper read by me before this Society five years ago in which I took the stand in face of considerable opposition, in favor of early operation in all cases and spoke of appendicitis as being strictly a surgical disease.

From personal experience I feel that a clearer knowledge of the early, or premonitory, symptoms of appendicitis on my part should have led to operation in my own case at least six months prior to what was recognized as my first and only attack.

I believe it to be quite within the possibilities of our profession within the next few years to recognize symptoms sufficiently early so as to be able to pick out from among our patients suffering from

gastric and intestinal symptoms, those who really have appendicitis in a chronic form, or at least who are more liable to have attacks later. These cases, by being carefully watched and operated at the proper time, will be spared the seriousness of a severe attack, with its consequent disadvantages for operation, or will be operated at the onset of the first attack.

Premonitory symptoms, such as tenderness and a feeling of inactivity or slight distress in the right iliac fossa, are certainly present in the majority of cases for a considerable time before the onset of the first attack.

I believe appendicitis will be found to differ from inflammation of almost every other organ in one respect, viz: A chronic stage of inflammation can often be recognized for a long period prior to an acute inflammation. In this chronic stage prior to an acute attack would be the golden time to operate, and there would not be at this time, in skilful hands, one-tenth of one per cent. mortality.

In examining the reports sent in I find some very interesting points, viz: Of the one hundred surgeons who answered the questions to No. 3, "Can a diagnosis usually be made within the first 24 hours?" ninety-three answered in the affirmative, two in the negative and five gave explanatory answers, leaning more to the affirmative than to the negative side of the question. In answer to No. 4, "Would you usually operate within 24 to 36 hours?" ninety-two answered in the affirmative, two in the negative and six gave explanatory answers, the majority of which are more to the affirmative than to the negative side of the question. In answer to No. 6, "Do you advise operation in chronic and interval cases?" an affirmative answer was given by ninety-six, a negative answer by none and an explanatory answer by four. In reference to the early symptoms as well as to the foregoing

questions, from the statistics of the one hundred physicians who had had appendicitis I get the following facts: Ninety-one were operated and nine had not been operated. Thirty had only one attack and were operated during or immediately after the attack. Seventeen had two attacks. Twelve had three attacks, eleven had four attacks and thirty had five or more attacks. Several were operated more than fourteen years ago. It is an interesting fact to note that out of thirty physicians who were operated during the first attack the great majority of them had their attack within the last few years, since we have learned more about the disease and about the best method of treatment and the most favorable time to operate.

Of 91 physicians operated, four had slight hernia following, and these were all drainage cases in which operation had been delayed. Sixty mention premonitory symptoms in the way of tenderness, gaseous distention, indigestion, biliousness, etc. All of them mention at the beginning of the attack such symptoms as pain, usually first general, then localized, nausea, vomiting, rigidity and tenderness, pain and tenderness being most common. All these symptoms were not present in all cases, but many of them were. Colicky pains were present in almost all cases.

Of the 91 who were operated, 90 advised early operation, and one did not answer the question; seven of the nine who were not operated advise against and one in favor of operation and one did not answer the question. There were seventy-eight who think that a diagnosis can be made within the first 24 hours, sixteen think not, and six did not answer the question. The one hundred cases represent three hundred and eighty-seven attacks, so you will see that over two hundred and eighty-seven cases "cured medically" were merely relieved and were not cured until operated later.

I believe the careful perusal of the full report will convince any doubting ones of the correctness of the following conclusions:

First, that symptoms more or less prominent precede almost every attack of appendicitis, sufficiently long so that every uncomplicated case could be operated in a safe stage and the mortality be reduced to almost nothing. Second, that a diagnosis can usually be made within the first twenty-four hours of the beginning of an acute attack, and that a large majority of physicians and surgeons agree that operation at that stage is safe and should be done, as well as in chronic and interval cases. Third, that medical treatment will not cure the disease, but that as a rule the patient will continue to have attacks until he succumbs to an attack or until he submits to operation, and that in nearly all cases symptoms cease after operation. Fourth, that close attention to our cases suffering from disturbance of the digestive tract and bilious conditions will show us that many of these are in reality cases of appendicitis.

Discussion.

Dr. Van Meter—As I happen to be one of Dr. Perkins's one hundred, possibly a few remarks as to my personal experience may be of some interest to you. I would like to lay special stress on the symptom that Dr. Perkins has brought out as to the peculiar, indescribable fullness or sense of inactivity, as he expressed it, in the right lower fossa, or appendiceal region. This symptom was the only one that I had for a number of years. I may say, in brief, that I had an attack lasting only a few minutes in 1894, which was sufficiently suggestive to me at that time to make me think that possibly I was coming down with an attack of appendicitis. From that time until the third of March, 1904, a period of ten years, I had no other symptom except this occasional sense of inactivity or fullness on the right side. On the third of March I was taken with acute abdominal pain characteristic of an attack of appendi-

citis. It passed away in the course of an hour with an evacuation of the bowels, and it was a question in my mind and the attending physician's whether it was an attack of appendicitis or not. Personally, I believed at the time when the pain was acute that it was. But as it disappeared and as the localized tenderness, which I had been placing so much reliance upon in my own practice, did not occur, I then became doubtful as to the accuracy of my first conclusion. I remained in bed for several days and at no time could I make out any more tenderness on the right side than on the left. This feeling of uncertainty would go first to one side of the abdomen and then to the other. On the morning of May 9th I was awakened at 5 o'clock with what seemed a symptom characteristic of gastric distress—no acute pain but enough to remind me that possibly something was wrong. Being on the lookout, I felt of my appendiceal region and I found it was tender, and from my experience I made up my mind in five minutes there was no longer room to question what was the cause, and, as Dr. Lyman will testify, it only took the matter of a few hours to be in the condition that I am to-day, that is, minus my appendix.

Dr. Whitney—I have neither had appendicitis nor am I a surgeon, and it may therefore seem extraordinary that I have any interest whatever in this disease. But we physicians do occasionally see a case of appendicitis and we are occasionally called upon for advice in this condition. I think those of us who have noticed the tendency of the past three or four years will have observed particularly two things: One is a very much greater tendency to operate in the first 24 hours, or the first 24 to 36 hours, than existed five years ago; the second tendency, which I would especially emphasize, is very much less frequent operation after the first 24 or 36 hours, that is, upon the second, third or fourth, or possibly the fifth day of the disease. I was impressed five years ago or more that lives were being sacrificed by operation at that period, and I then wrote a paper and presented it to this Society, attempting to emphasize the fact. This paper was very strongly criticised, and I was thought at that time to object to almost any sort of operation in appendicitis. For my own satisfaction I ask the indulgence of the Society while I read one or two sentences from that paper presented five years ago; possibly it will not interest you very much, but this was before the time of Ochsner, when we had heard nothing about the

starvation treatment of appendicitis, and it is therefore some little satisfaction to me to have then advocated a very similar procedure. I said, first:

"It is unquestionably logical, and would, perhaps, under certain conditions, reduce the mortality to insist that every case should be operated as soon as recognized." I took it for granted, of course, that such recognition would be early.

And then, further:

"If it were adopted as a general principle that except for general peritonitis any operative interference after the first twenty-four hours should be postponed, if possible, until the end of the first week, I firmly believe that the mortality of appendicitis would be less than it is at the present time. Instead of saying with some, 'When in doubt operate,' I would say, when in doubt on the third, fourth or fifth day, wait! The reasons which may be adduced in support of this principle are both pathological and clinical, and they have the weight of much authority. It seems probable that in many cases of appendicitis the very first symptoms are caused by the development of a local peritonitis. This is nature's barrier—inflammation, exudation, adhesion. To disturb the process at a time when it is still incomplete, and when the focus of infection has already done about as much mischief as it can do, would theoretically seem both hazardous and unnecessary."

And then, finally:

"The most important question outside of opium relates to diet. It is evident that it should be such as to leave the least possible residue. I believe that the plan of Sahli to give nothing by the mouth, not even water, during the first few days, is rational; he feeds meanwhile by the rectum. Certainly in any severe case, as Nothnagel says, rectal feeding alone would be the safest plan, with the administration of water in only teaspoonful doses."

At that time I advocated also the use of opium. I wish to say that I have corresponded recently with Ochsner on this matter and he tells me that he always uses opium in small doses for the relief of pain. I believe, therefore, that at the present time, the treatment of appendicitis as followed by most surgeons and by most medical men is this: If a case is seen within the first 24 hours and can be operated during that time, it should be done; possibly in the next 24 if there is no evidence of general peritonitis—possibly later even under the same conditions. But as a rule, after the first 36

hours have passed, I believe that the best practice is to wait and to follow a medical plan of treatment in the majority of cases until there is either an abscess or until the patient has passed the period of danger, when the interval operation can be safely performed. I believe that there is, therefore, still a medical treatment for appendicitis, and such treatment is not infrequently called for and should be applied after the favorable period has passed for operation. I am, therefore, a warm adherent of the plan of Oschner, and I still believe, just as earnestly as I did five years ago, that opium is at times a most valuable remedy. I would not give it to the point of narcotism; but if one decided not to operate until a more favorable period for operation has been reached, there is no remedy equal to opium for splinting up the bowels, and thus favoring the formation of salutary adhesions. I believe every patient should be advised to undergo the interval operation for appendicitis if he has had more than one attack.

Dr. Wooding—I do not intend to make any statements along the surgical lines of this disease, but I would add two or three peculiar experiences. One is a case in which a complete paralysis of the bowels occurred, and at the operation there was scarcely any disease of the appendix found. In another a lady lost her voice for about one week. As medicines, I have used calomel and santonin. Whether it is good treatment or not I don't know, but I have had a good many cases that have got along very nicely, and I commenced to use it after seeing a report of a French surgeon who had a daughter that was very ill and they decided she could not possibly live whether operated or otherwise, and he believed it to be due to intestinal worms, very small intestinal worms, which he states he believes to be the origin of appendicitis. He used this combination of drugs, calomel and santonin. I also think that morphine should be used to quiet the pain, if there is very much, and also the peristaltic action. Also the diet should be very materially restricted.

Dr. Perkins—I have enjoyed Dr. Grant's paper very much and agree with him in most of the remarks in his paper. The one thing, after the first two or three days, that we have not yet been able to surmount is the difficulty of telling what the condition is in the abdomen. If we could find out beforehand what the condition was in the abdomen, if we could know accurately, we might with great advantage

leave some cases unoperated. At least the surgeon's statistics would be lightened in that way. Practically all of the deaths I have had in the last few years have come in cases after the 36-hour limit, say 48 hours to a week; practically all of the deaths have come in that class. I formerly believed that no matter whether they had or had not been operated many of them would have died any way. Whether or not I have saved a less or a greater number I do not know. However, this is a question that I did not take up in my paper. If you noticed, I treated with the early diagnosis and the early treatment. My object in that was this, that the profession appears to be almost a unit in regard to the one thing of operating early. They are also almost a unit in regard to interval operations. The greatest mistake, so far as I can find out from the literature and from discussions that I have had on the subject, is the tendency of a great many to apply the Ochsner treatment to the case before the time which was intended. Just as Dr. Whitney says, if you look to the operation within the first 24 hours, and then after that time bridge them over, I believe myself that it is probably going to be the best method. If, however, we start in—if the man who sees the case first, which is the family physician, if he begins with the Ochsner method, if he gets the case within five hours, within six hours, within ten hours, within twenty-four hours, and fails to recognize that it is appendicitis, when the symptoms are present by which appendicitis could be recognized, there is where the great necessity lies in educating ourselves to that point. Now, then, it has been but a few years since we all looked for a very different class of symptoms in diagnosing appendicitis to what we look for now. No one hunts for pus, or hears such talk as "I think this case ought to be operated because I feel there is pus there now; I have been watching it for four or five days for pus formation." You don't hear that sort of talk which was very common a few years ago. I think in the next few years we will be recognizing these conditions very, very much earlier than we are now, and I believe that when we do there will be more cases operated early, there will be more lives saved in that way, and thereby the necessity for the Ochsner treatment, which is undoubtedly from these reports the accepted treatment if any medical treatment is used at all, will be limited to the cases that fail to call

their family physician until the 24 hours has passed.

Dr. Grant—I don't know that any will remember, but in reference to the operation in the early stage my position was as positive ten years ago as it is now, and I made a statement in this hall that if every case of appendicitis, regardless of its character, could be detected and operated upon by a competent surgeon within the first 24 to 36 hours the mortality would not exceed two per cent, an opinion which every competent surgeon now endorses, but which at that time was not endorsed by a great many. I believe that the attack is never acute primarily. I believe that the disease starts mildly and it is not recognized by the patient nor even by the physician, and in fact often they do not go to the physician. There are many things which indicate that the disease is never in its primary stage an acute disease. I want to make one remark in regard to the Ochsner treatment, which is that the Ochsner treatment is as powerful for harm as it has been in some respects for good. It ought to be recognized that it has caused many purely operable cases to be delayed too late, with a consequent fatal result; and this is a point which the general practitioner as well as the surgeon ought also to recognize, that delay in waiting for a more favorable time after perforation is simply saying that the patient may get well but generally that he will die. He might live without the operation, but the operation is the only thing which gives such patient the opportunity to get well. I wish simply to call attention to the danger of the Ochsner treatment—which, in fact, was practiced by Fitz and Richardson of Boston before it was by Ochsner, but Ochsner popularized it—on account of this tendency in the professional mind at the present time to believe that these patients will most all get well if you will simply starve them and put them on their backs and give a laxative and rest their stomachs that they will get well. It has a very fatal side to it. It requires a very discriminating judgment as to when the Ochsner treatment ought to be applied or practiced, and I am satisfied it is to-day greatly abused.

Dr. Wetherill—This is a little irregular, but I have just come in and I would like to say one word in regard to this very question to which Dr. Grant has just alluded, and which was alluded to by Dr. Perkins, the question of whether the Ochsner treatment should be instituted when operation might better be done.

It seems to me that every surgeon, no matter whether he intends to operate or not, or what his attitude in regard to this matter might be, ought to come to the conclusion that whenever he has a case of appendicitis the life and the health of that patient depends absolutely upon an arrest of peristalsis of the intestines and of quiescence in the intestines, and that as a matter of fact the so-called Ochsner treatment ought to be introduced and ought to be initiated in every single solitary case that resembles appendicitis in any way, whether the diagnosis is made absolutely or not and whether we are expecting to operate or not. This is the thing we want to do. We want to keep an empty intestine. We want to keep a quiet intestine, and we want to keep the focus of infection which exists in the appendix from entering and spreading about the peritoneal cavity, and whether we operate in two hours, or three hours, or five hours, or twelve hours, or whether we do not operate at all, the Ochsner treatment is the treatment which ought to be instituted just as soon as the diagnosis is made, and when we suspect that any irritation about the appendix exists. That, I think, is a tremendously important thing, in which I believe both Dr. Perkins and Dr. Grant have taken a mistaken position.

Dr. Perkins—The discussion has closed, but Dr. Wetherill having spoken I would like to say this, that Dr. Wetherill misunderstands me altogether in that regard. The Ochsner treatment as put forward by Ochsner was intended after the 36 hours, 24 to 36 hours. As a matter of course you would not expect anybody—I don't know of anybody who would come in and commence to treat a patient or to try to stir up the infective matter. As regards the question of cathartics, I brought out nothing special here, but in a great many of these reports cathartics are mentioned and by some of the most prominent men; Ochsner, however, mentions no cathartic at all. If the colon is full I would say that on first going to a case it would be good practice to give a small enema, not a large enema, not an enema sufficient to go around to the cecum at all, but a small enema and depend on the bowel emptying what it can. If there is emesis the stomach is usually empty. It is not necessary to wash the stomach in every case where you are in doubt and waiting for a diagnosis, but if one is called and watches the case for a few hours and then contents himself with the Ochsner treatment to carry that case through, that is the class of cases in which

I objected to this carrying through method, and that is what my last remark refers to, that in the future that method as a method would be applicable only to cases neglected, meaning after the 36 hours.

Dr. Grant—Dr. Wetherill evidently did not hear all that I said on the subject, because I occasionally practice the Ochsner method. But it is the delay encouraged by the Ochsner treatment with which I find fault. The Ochsner treatment makes physicians practice delay in purely operable cases, which ought to be operated upon and would be by any competent surgeon, were they not delayed by the claims of the Ochsner treatment. They delay these cases until they pass the favorable stage and become inoperable or so dangerous that the surgeon himself would hesitate, that is, between the third and seventh day, but would wait that time for a more favorable condition. After perforation and general peritonitis the patient will rapidly die unless immediately operated upon. The patient may get well with an operation, but will certainly die without it. If circumscribed adhesions should protect the peritoneal cavity from general infection it may be safe to delay.

COUNTY MEDICAL SOCIETIES.

The Boulder County Medical Society met in regular session at 8 p. m., February 2, at the Court House, with O. M. Gilbert in the chair. The members present were Drs. Giffin, Gilbert, Queal, Trovillion, Miles, Jolly, Bell, Russell, Rodes, Wood and Cattermole. The guests were Drs. Spencer and C. A. Cattermole. Dr. C. A. Cattermole was elected a member of the Society, and the name of Dr. Spencer was proposed for membership.

Dr. L. M. Giffin introduced a resolution which read as follows:

"Resolved, That the members of this Society are in hearty accord with the proposed issue of bonds for the purpose of extending the intake pipes of our water system beyond any possible source of contamination from mills, towns, or dwellings, and that we believe the proposed extension will be of inestimable benefit to the people of the City of Boulder, by preventing the infectious diseases."

The matter was thoroughly discussed and all the members present indorsed the resolution. The Secretary was instructed to give copies of the resolution to the local papers. On motion

of Dr. Rodes, a committee of three was appointed to bring this matter before the people of Boulder and the City Council, showing the stand taken by the medical profession.

Dr. M. E. Miles gave the address of the evening, taking for his subject "**Recent Work in Anatomy, Including the Neurone Theory.**" Dr. Miles pointed out the difficulty in diagnosing diseases of the nervous system by persons who were ignorant of the anatomy of those structures. Waller's law has been of great value in aiding development along this line of study. It has been shown that if the nucleus of a nerve cell is destroyed, the cell body as well as the fibers given off from it will degenerate, but if only the cell body or fibers are injured, they may regenerate. He showed that nerve cells develop from ordinary epiblastic cells. First a process starts out from one side of the cell, at this stage he called the cell a neuroblast. Later, several processes grew from the opposite side of the cell. The process first thrown out is called the axone, those growing out later are dendrites. In 1891 Waldeyer instituted the name "Neurone" for the cell body, and its processes, and strongly upheld the theory of the individuality of neurones.

The theory of the dynamic polarity of the neurone was advanced by Van Gehuchten and later upheld by Cajal. The hypothesis was that impulses reached the cell body over the dendrites and passed out by way of the axone. Those who claim that neurones are independent anatomical units have never explained, satisfactorily to all, how impulses pass from one neurone to another.

Apathy and Bethe claim that the neurones are not isolated cells, only coming into surface contact with their neighbors, but that they have been able to trace "neuro fibrils" from one to another.

The practical value of this work is great in the diagnosis or treatment of diseases of the nervous system. By knowing how certain nerve groups pass into certain ganglia, we may locate the seat of disease and account for the grouping of symptoms. At present the neurone theory gives the best working hypothesis in nervous diseases. But in order to apply this theory one must have modern ideas of the anatomy and physiology of the nervous system.

Dr. Miles' paper was discussed by Drs. Giffin, Queal, Spencer and Gilbert. Dr. Gilbert called attention to recent reports by Sherrington and Mott, who assert that all volition is reflex from

external impressions, not from the higher nervous centers.

The discussion of **Influenza**, with reports of cases, was led by Dr. Jolly, who called attention to the severe epidemics of 1849 and 1889. He mentioned the case of a woman with an infant eight days old, where the temperature went up to 104°, with other symptoms equally severe, yet the woman made a good recovery. Other members of the Society called attention to the prevalence of influenza symptoms in women during the puerperium; also, the prevalence of colitis and nervous cases evidently due to influenza.

Dr. Russell, Health Officer of Boulder, reported that there was one case of diphtheria and two cases of small-pox in the city at the present time.

Dr. Miles read the treasurer's report for the previous year, and the Legislative Committee reported having urged our senator and representatives to vote for the medical practice bill without amendment.

On motion the Society adjourned.

GEO. H. CATTERMOLLE,
Secretary.

Delta County.—A meeting of the Delta County Medical Society was held at Delta, January 25th, the following officers being elected for the ensuing year: President, Dr. D. V. Meiklejohn of Hotchkiss; Vice-President, Dr. S. B. Houts of Delta; Secretary, L. T. Brown of Summer-set; Treasurer, Dr. E. A. Miller of Cory; Delegate, Dr. H. W. Hazlett of Paonia.

A committee to be known as the Credential Committee, and consisting of the President, Vice-President and Secretary, was formed.

The next meeting will be held at Hotchkiss on March 21st, 1905.

L. T. BROWN, Secretary.

Denver.—The regular meeting of the Medical Society of the City and County of Denver was held in the Academy of Medicine Hall, Tuesday, February 7th.

Upon the recommendation of the Censors, Dr. W. A. Harroun was expelled from the Society.

Nephrectomy for Renal Tuberculosis was the subject of a paper by Dr. Leonard Freeman. He said that in Colorado, being so occupied with the subject of pulmonary tuberculosis, we were liable to overlook the importance of tuber-

culosis in other organs. Tuberculosis of the kidney was apt to be unilateral, at least in the beginning. Medical and climatic treatment was unsatisfactory. But if recognized early, before the bladder was too seriously involved, it was possible by the removal of the diseased kidney to effect a complete cure. Tuberculosis of other organs, even of the bladder, was not a contra-indication. It was essential, however, that the second kidney be sound both as to tuberculosis and as to function in general. The weight of evidence was against partial nephrectomy, and nephrotomy was not to be considered, except for temporary palliation where nothing more could be done.

He reported eight cases, equally divided between the sexes. The youngest patient was a boy of ten or twelve, the oldest a woman of 50. The other six patients ranged from 25 to 35 years of age. Although the urine of all of them contained pus, and sometimes blood, careful examination had shown tubercle bacilli in but two cases.

One patient, a woman aged 30, died of uremia 8 days after the operation. The woman aged 50, had been suffering for 5 years, and was greatly emaciated and exhausted, and in whom the operation was done with nitrous oxid anesthesia to escape the danger of ether or chloroform, died three weeks after the operation of exhaustion. The boy recovered and remained well, until he committed suicide $3\frac{1}{2}$ years after the operation. The other five patients were still living at periods of $1\frac{1}{4}$ to 5 years after operation. Four of them were well, and one, who also had tuberculosis of the bladder, was greatly improved with the prospect of complete recovery.

Dr. Sewall dwelt on the danger of the second kidney becoming infected, and upon the efficiency of urinary antiseptics in the treatment of tuberculosis of the urinary tract.

Dr. Arneill instanced a case in which tubercle bacilli were supposed to be found in the urine; but in which operation showed the kidney was not tubercular. It was impossible to distinguish between them by the ordinary methods of staining tubercle bacilli. Although Pappenheim's solution would discolor the smegma bacillus much more readily.

Dr. Beggs pointed out that the infection usually became bilateral, and it was not possible to be sure in any case that the second kidney was free from tubercular foci. Tubercular foci must form and discharge into the pelvis of the kidney before any evidence of their ex-

istence would be found in the urine. Should both kidneys be involved, removal of one would lessen the amount of renal secreting tissue, and might ultimately shorten the patient's life.

Dr. F. L. Dixon (President of the Maine State Medical Society) spoke by invitation. His experience led him to agree with the conclusions of Dr. Freeman. If he knew one kidney were diseased, and that the other secreted urine normal in amount and composition, he would have the diseased kidney removed, even though the possibility of involvement of the other could not be excluded.

Dr. Jackson referred to the chronicity of these cases. He had been present at an autopsy where the kidney disease had been recognized 23 years previously.

Dr. Freeman, closing the discussion, said that from the recorded experience it was now known that in many cases the second kidney would not become involved. He thought confusion of the smegma bacillus with the tubercle bacillus could be avoided by the careful use of the catheter.

Dr. T. M. Burns read a paper entitled **Cases Illustrating the Frequency of Mistakes in the Diagnosis of Pregnancy.** He reported 18 cases, each illustrating a different form of error. In one a diagnosis of shoulder presentation had been made and after watching the case for three days for progress in labor, pseudocyesis was recognized. In another the menopause had been treated up to the supposed 8th month as a case of threatened abortion. A third illustrated that subinvolution may co-exist with pregnancy. In another the uterus, after careful examination, was pronounced too small for pregnancy, at the end of two months of pregnancy. In tubal pregnancy with early destruction of the fetus, the placenta had continued to develop until term. Abscess in one broad ligament co-existed with the extrauterine pregnancy in one case. A ruptured extra-uterine pregnancy had been diagnosed as a fibroid tumor. Dermoid cyst was the diagnosis for a seven months' pregnancy. The five months' pregnant uterus had resembled a tumor even after the abdomen was opened. Pregnancy had been unrecognized even after labor had commenced, because no examination had been made. Of two tumors felt in the abdomen one proved to be an over distended bladder, the other being the pregnant uterus. A supposed eight months' pregnancy was simply an accumulation of gas and feces. A case diagnosed as twin pregnancy proved to have been one of

pregnancy with fibroid tumor of the uterus. The Professor of Obstetrics in one of our foremost medical colleges opened the abdomen for extra-uterine pregnancy and found a normal twin pregnancy.

Dr. Wetherill found that in this connection the only mistake that was inexcusable was the other fellow's mistake. One's own errors could be easily explained and excused. He instanced a case in which Prof. Goodell, after opening the abdomen for a fibroid tumor felt uncertain of his diagnosis and deferred the completion of the operation three weeks on that account.

Dr. Burns, closing the discussion, said to avoid errors the important thing was time, and that such mistakes more frequently occurred with these of large experience.

Dr. A. E. Engzelius called attention to the use of **orthoform for the diagnosis of gastric ulcer**. This drug would relieve pain only when it came in contact with the exposed nerve endings. It therefore had no effect upon the pain of gastritis. He had tried it in one case in which other measures had failed to relieve the pain. The administration of orthoform very promptly relieved it, and the diagnosis of gastric ulcer was subsequently confirmed by the vomiting of blood.

Dr. Sewall reported a case of **fluid in both pleural cavities**, in which examination showed nothing wrong with the heart but the rapid re-filling with fluid after aspiration was taken to indicate pressure on the pulmonary veins.

Dr. Beggs showed the specimens obtained by autopsy. The pericardium was universally adherent to the heart which was dilated. The pleural cavities were almost obliterated, and very thick, firm exudate, or organized tissue, covered the pleura. He thought the disease probably tubercular, but only the microscope could determine this.

The committee to take action looking to better telephone service for diminished rate, made a report of progress, giving rise to a prolonged discussion, which was participated in by a representative of the Telephone Company.

El Paso County.—The regular monthly meeting of the El Paso County Medical Society was held in the Science building of Colorado College. The members of the El Paso County Odontological Society were present as guests.

The paper of the evening was by F. S. McKay, D. D. S., and was entitled "A Discussion of the **General Principles of Orthodontia** with

Their Special Reference to the Medical Practitioner, illustrated with stereopticon. A very interesting discussion followed the paper, led by A. H. Ketcham, D. D. S., of Denver.

Dr. H. G. Gaylord was elected to membership in the Society, and the application of Dr. John Francis McConnell to become a member of the Society was received.

Following the meeting lunch was served at the Plaza hotel.

M. P. REYNOLDS, Secretary.

Lake County.—A regular meeting of the Lake County Medical Society was held January 19th at the office of Dr. R. J. McDonald, President Dr. M. Kahn in the chair. Those present were Drs. Whitmore, Sol. G. Kahn, A. J. McDonald, R. J. McDonald, Maurice Kahn, and Calkins of Leadville, Condon of Breckenridge and Osborn of Kokomo. A number of interesting cases were reported and discussed.

Dr. A. J. McDonald read an interesting paper entitled, "**Ideas From Recent Literature**," giving some of the recent literature and his experience with the various drugs, particularly veratrum viride in eclampsia and picric acid in burns. The paper received much favorable discussion.

The Society elected Dr. C. K. Osborn of Kokomo to membership. After the meeting Dr. R. J. McDonald served to his guests a most bountiful and elegant lunch.

On February 2nd the regular semi-monthly meeting of the Lake County Medical Society was held at the office of Dr. B. F. Griffith, Dr. Maurice Kahn presiding. Owing to the absence of Dr. R. J. McDonald there was no paper read, but the time was devoted to the report and discussion of cases.

Those present were Drs. Griffith, Whitmore, Boyd, A. J. McDonald, S. G. Kahn, M. Kahn, Calkins, and Dr. Mayne of Como.

H. A. CALKINS, Secretary.

Larimer County Medical Society.—The regular monthly meeting met in the city hall, Fort Collins, Colo., February 1. Present: Drs. McHugh, Fee, Reckly, Hoel, Upson, Gilbert and Stuver; President McHugh in chair.

A paper on "**The Doctor and the Public**" was read by Dr. Stuver and discussed by Drs. Gilbert, Upson, Fee, McHugh and Stuver. Dr. Stuver presented a case of "**delayed vaccination**" (?) This was a woman aged 31, who was

vaccinated seven years ago, but it did not "take" at the time, although the operation was performed three times inside of two weeks. About ten months ago a typical vaccine sore appeared at the site of the old operation, the only difference between its course and that of the ordinary vaccination sore being that it was about four months in passing through the various stages of its evolution. A well defined typical scar remained at the site of the sore. Nearly three months ago, three other sores appeared at the same old operation sites, and just below the scar above mentioned. They passed through the papular, vesicular and pustular stages and two are now covered by well formed typical scabs still on the arm. The other scab fell off several days ago. No history of syphilis or other constitutional trouble could be elicited. The case was discussed by Drs. Hoel, Fee, McHugh and Stuver, but without arriving at any definite conclusion as to the cause of the anomaly.

Dr. Hoel reported a case of **superfecundation**, in which one deformed fetus was delivered about full term; and another fetus that had died at about three months' development and had been retained, was also removed.

Dr. McHugh reported the **removal of a placenta**, that had been retained nine months. During this time it had become detached and was found rolled up like a ball in the uterus. He also reported a case of **phantom pregnancy**.

It was moved, seconded and duly carried that our senators and representatives be petitioned to use every honorable means to secure the passage of the Medical bills now pending before the legislature.

The following resolutions amending the By-Laws in accordance with the recommendation of the reorganization committee of the State Medical Society, viz.: That "Every reputable and legally qualified physician, residing within its jurisdiction, who does not practice nor claim to practice and agrees not to practice sectarian medicine shall be entitled to membership," (Chapter 11, Section 5, Revised By-Laws), was read on motion, duly seconded, approved.

Five applications for membership were presented and on motion the Society adjourned to meet February 8, to act on these applications and vote on the passage of the amendment to the By-Laws.

E. STUVER, Secretary.

Las Animas.—The regular meeting of the Las Animas County Medical Society was held Friday evening, February 3, at the office of Dr. R. G. Davenport, Trinidad, Dr. Davenport presiding. Dr. Forhan reported a very interesting case of **twin labor** in which the first child was delivered alive and the second one dead, the cause of death of the second child being a knotting of the cord.

Dr. John R. Espey then gave a very interesting talk on "**Hypertrophy of the Prostate**," which was followed by a discussion of the subject by all present.

The petition urging the incorporation of the American Medical Association was then read

and signed by all of our members. Another petition urging our representatives in the State Legislature to use their best efforts to assist the medical bill now before that body was passed.

Drs. Lucas, Onstine and Cawley were elected to membership. The Society then adjourned to the Columbian hotel, where a banquet had been arranged in honor of Dr. Frank Finney, but shortly before the meeting word was received from Dr. Finney that he was unable to attend. At the banquet Dr. Forhan acted as toastmaster in a most creditable manner, and toasts were responded to by all present, after which the Society adjourned.

ALFRED FREUDENTHAL,

Acting Secretary.

Mesa County.—The Mesa County Medical Society met in regular session on Tuesday evening, February 7, 1905. The programme for the evening consisted of a symposium on the subject, "**Typhoid Fever**." The following gentlemen taking part as indicated: Dr. I. B. Hards, Clinical History; Dr. H. R. Bull, Diagnosis; Dr. K. Hanson, Complications and Sequelae; Dr. H. S. Henderson, Prognosis; Dr. L. F. Ingersoll, Treatment. The subject was freely and profitably discussed.

The meeting was held at the elaborate home of Dr. and Mrs. H. R. Bull, whose guests the members were upon this occasion.

At the conclusion of the formal programme the members were invited to sit down to an elegant spread, to which all present did full justice. Social conversation and good cheer were enjoyed with the cigars, and time passed rapidly. At the conclusion a unanimous vote of thanks was tendered our host and hostess for the pleasant time enjoyed. Those present were, Drs. Bull, Smith, Hards, Ingersoll, Day, Green, Henderson, Abbott and Taylor.

A. G. TAYLOR, Secretary.

Pueblo County.—The regular meeting of the Pueblo County Medical Society was held January 17, in the McClelland Library. The paper of the evening was read by Dr. B. B. Frankle. The following is an abstract:

Medical Ethics.

Medical Ethics is only a small part of that larger subject of ethics in general, and some knowledge of the latter is necessary for a proper understanding of the subject.

Ethics is conduct and in its full acceptance must be taken as comprehending all adjustment of acts to ends. The scope of ethics includes all conduct which furthers or hinders in either direct or indirect ways the welfare of self or others.

The intimate and confidential relation of physician and patient, the overcrowding of the ranks of the medical profession with its attendant evils, the encouragement which the law, the laity and the press give to new cults and pathies and the increase of the number of medical chalatanes who prey on the credulity of the public, are good and sufficient reasons

for establishing certain principles for the guidance of physicians in their conduct toward themselves, their patients and the community at large.

Generally speaking, the principles of medical ethics comprise:

1. The duties of physicians to their patients.
2. The duties of physicians to each other and the profession.
3. The duties of the profession to the public.

Those portions of medical ethics which relate to the duties of physicians towards their patients and their duties toward the public, are usually observed in their entirety. Most physicians keenly realize the confidential relation existing between them and their patients, the broad humanitarian lines of their life work, the necessity for the prompt relief of the sick and the injured, their unusual and unique position in the social fabric, the necessity for gentleness and encouragement in administering to the sick and strengthening the will of those who wish to be emancipated from their evil habits and consequences. Similarly, physicians thoroughly understand and fulfil their duties towards the public at large.

The most frequent breach of the written and the unwritten laws of ethical conduct, so far as physicians are concerned, is that relating to their treatment of each other in the course of their professional contact. The remedy for existing defects and patent evils in our ethical system, does not depend on iron clad, written nor specific rules of conduct, nor upon the strict observance of such principles of ethics generally accepted as proper and necessary.

Character must be the foundation upon which ethical action is to be built. The ranks of the medical profession must be recruited from men of broad mind, of high ideals, of lofty purposes, of enlightened thought, of charitable tendencies and of honest intentions. This is the remedy for the defects in our ethical system and when this is accomplished, the medical profession will be what it should be; a common brotherhood working harmoniously for the common welfare of humanity.

M. J. KEENEY, Secretary.

Weld County.—The regular meeting of the Weld County Medical Society was held at Dr. Law's office on Monday evening, February 27. The meeting was called to order by the president. Dr. Weaver, presented the following report of a case recently under his care:

Mitral Incompetency, Pregnancy, Eclampsia, Twins and Death.

Mrs. B—, age 39, multipara. In spring of 1904, while in East, first presented signs of uncompensated mitral regurgitation. Personal history with respect to rheumatism or contagious disease, negative. Her condition proved amenable to treatment and in no wise serious until complicated by pregnancy, when, as time advanced, dyspnoea became more urgent and at times critical. There was considerable edema of legs; and urine, while very scanty, was non-

albuminous. Infusion of digitalis with potassium acetate carried her along until past the eighth month when she took to her bed. A week later, the swelling of the legs having subsided and heart doing fairly well, she was seized with a convulsion of considerable severity; this being repeated within a few hours, and the interim being characterized by mental bazziness, I summoned a consultant and we decided to bring on labor at once. Accordingly two sterilized bougies were inserted between the uterine wall and contained sac, one on each side, to a depth of five or six inches, about 4 p. m. of January 24. Between that time and midnight several convulsions occurred; and a comatose condition, as well as cyanosis, became much more marked. Labor pains, however, began to be evident, and by 10 next morning the bougies were expelled and os dilated to a diameter of $2\frac{1}{2}$ inches. I concluded labor by manual dilatation and delivery under chloroform, relieving her of a boy and girl, both presenting by the breech. The babies were pretty blue, artificial respiration resulting in a few feeble cries; but their brief existences terminated almost at the same instant twenty-four hours later. The puerperium lasted less than 48 hours. On the 26th she continued to do fairly well. Urine free but loaded with albumen. Consciousness by no means complete, and pupils retracted. Her brother (a physician) who arrived shortly after delivery, now assisted in the direction of affairs, and on the afternoon of 26th our opinion was favorable. No rise of temperature, pulse 100, fairly strong. In the evening, however, she took a less favorable turn—more cyanotic, breathing rapid and superficial, and coma deepening. By midnight her pulse was 122, and her temperature suddenly rose to 108 degrees. A lapse of coma here occurred, and she realized the gravity of her condition long enough to say good-bye to the family. In a few minutes the coma again deepened and she passed away at 4 a. m. of the 27th.

The regularly appointed leader of the evening was unavoidably absent. Dr. Law gave a brief resume of fifty cases of **Cerebro-spinal Meningitis**, many of which came under his care during the campaign of the early sixties. No further business being presented the meeting adjourned.

C. B. DYDE, Secretary.

OTHER MEDICAL SOCIETIES.

Denver Clinical and Pathological Society.—The regular monthly meeting of the Denver Clinical and Pathological Society was held Friday evening, February 10th.

Dr. Hill exhibited a specimen of milky urine passed 18 hours after the patient had been seized with intense pelvic pain and symptoms of collapse. Later she was found to be suffering from extra-uterine pregnancy. The urine contained albumin, and the microscope showed the opacity to be due to fat drops, and also showed the presence of fibrin. A photograph

of the slide was also shown. Discussed by Dr. Sewall.

Dr. Childs exhibited **skiagraphs** of a head, showing a metal tube in the antrum of Highmore, also filling in the teeth; also one of a comminuted fracture of the femur, showing a spicule of bone interposed between ends of shaft, and (3) extra-capsular fracture of the great trochanter.

Dr. Hopkins exhibited a skiagraph of a **gun-shot wound of the head**, the bullet passing through the right frontal lobe, and locating itself in the occipital lobe, hemiplegia following.

Dr. Wetherill exhibited a device made from rubber tubing, for the purpose of **uterine injection and drainage**.

Dr. Beggs exhibited a heart, showing total **obliteration of the pericardial sac**, and the lungs of the same subject showing bronchial pneumonia of the upper lobe of the right, with pleuritic effusion of both sides. The kidneys were nephritic and spleen infected.

Dr. Hershey made a further report on his case of **Raynaud's disease**, general gangrene resulting after amputation of the right toe. The chief features of the case were gangrene of the venous system and solidification of the right lung. Death resulted after a period of two years. Discussed by Dr. Sewall.

Dr. Hickey reported a case of right **hemiplegia** with cardiac complications. Discussed by Drs. Hall, Hillkowitz and Sewall.

Dr. Edson reported a case of **true angina pectoris**, previously treated by an osteopath for a "dislocated rib." Discussed by Drs. Stover, Wetherill and Bergtold.

Dr. Blaine reported two cases of **urticaria**. (1) A physician suffering an intense attack, finding complete relief only after the use of a spray of ethyl chloride. (2) A case of acute gastric indigestion, accompanied by urticaria, impaired vision and transient aphasia. Discussed by Drs. Hershey, Sewall, Childs and Hopkins.

Dr. Levy discussed the use of **anesthetics in operations for the removal of adenoids and tonsils**, and stated that in a certain percentage of cases, he found the work could be done without anesthetics. Discussed by Dr. Waxham.

DEATHS.

Dr. **Fred P. Tuxbury** died at his home in Denver, February 5th. He was a native of Massachusetts. He graduated at Dartmouth College in 1893, and from the medical department of that institution in 1899. He entered upon practice in Denver the year of his graduation. He was a member of the Medical Society of the City and County of Denver, and took an active part in its proceedings. A special meeting of the Society was held February 7th, at which resolutions of regret and condolence were adopted.

Dr. **C. W. De Lannoy** died at his home in Telluride, February 6th. He was a native of Georgia; and graduated from Jefferson Medical College, Philadelphia, in the class of 1881. He entered upon practice at Chester, Pa., but removed to Colorado in 1896. He practiced at Leadville until 1899, when he removed to Tel-

luride. His death was the result of a scratch upon the finger, received while making a post mortem examination, about four months previously. He was a member and secretary of the San Miguel County Medical Society.

Dr. **Charles Parker French** died at his residence in Denver, February 23rd, at the age of 81 years. He was a native of New Hampshire. Studied at Dartmouth, and at Castleton Medical College, Vermont. He practiced many years at Virden, Ill. He came to Denver in 1863, and continued in active practice until about 10 years ago.

BOOKS.

Progressive Medicine. Vol. IV, December, 1904—Edited by Ilohart Amory Hare, M. D. Octavo 370 pages, 79 Illustrations. Cloth Bound per annum \$9.00; paper, \$6.00. Lea Brothers and Company, Philadelphia and New York.

This volume completes the fifth year of **Progressive Medicine**. It may be safely asserted that no other equal number of volumes now extant, in any language, give so complete, well-proportioned, accurate and convenient account of medicine and surgery, as they are known and practiced to-day in civilized countries. The practitioner who has mastered the contents of these volumes is thoroughly well posted and up to date in his knowledge of these subjects. No one who is ignorant of a large part of their contents can claim such qualifications for his work. The broad grasp of general principles and recent advances along other lines, which such a publication furnishes, constitutes an important part of a sound preparation for any line of special practice. This particular volume contains the annual articles on: Diseases of the Digestive Tract and Allied Organs, The Liver, Pancreas, and Peritoneum, by J. Dutton Steele, M. D.; Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics, by Joseph C. Bloodgood, M. D.; Genito-Urinary Diseases, by William T. Belfield, M. D.; Diseases of the Kidneys, by John Rose Bradford, M. D., and the Practical Therapeutic Referendum, by H. R. M. Landis, M. D.

Probably there are many unfamiliar with the Therapeutic Referendum, who if they knew it well would regard it as worth the whole price of the work. Its 80 pages of matter are arranged alphabetically, running from acetanilid to X-Ray through the whole list of therapeutic agencies, regarding which any important experience has been reported during the past year.

It is interesting to note that in these days of surgery the Medical Treatment of Gastric Ulcer occupies several pages; and the subjects of Hyperacidity and Hypersecretion are considered at equal length. The diagnosis of carcinoma of the stomach occupies seven pages; pancreatic disease gets ten pages. Tumors, benign and malignant, which do not show in the title of Bloodgood's article, take up some sixty pages, and his review of Osteomyelitis is especially complete.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month.....O. M. Gilbert, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, September and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, September and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Thursday in each month..E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month.....
Teller County, fourth Tuesday in each month....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

American Medical Association

Next meeting at Portland, Oregon, July 11-14, 1905.

President:

John H. Musser, Philadelphia, Pa.

President-Elect:

Lewis H. McMurtry, Louisville, Ky.

General Secretary and Editor:

Geo. H. Simmons, 103 Dearborn Ave., Chicago, Ill.

Chairman of Committee of Arrangements:

K. A. J. McKenzie, Portland, Ore.

State Medical Societies

Place and Date of Meeting with Name and Address of Secretary.

Arizona Medical Association, Prescott, April, 1905...J. W. Foss, Phoenix
California, Medical Society of State of, Riverside, April 18-20, 1905
.....P. M. Jones, San Francisco, Y. M. C. A. Bldg.
Idaho State Medical Society, Boise, Oct. 5, 6, 7.....E. E. Maxey, Boise
Indian Territory Medical Association, Tulsa, June 20-22.....
.....R. J. Crabil, McAlester
Kansas Medical Society, Wichita, May, 1905....C. S. Huffman, Columbus
Montana State Medical Association, Butte, May 17-18.....
.....G. W. Cahoon, Butte
Nebraska State Medical Association, Beatrice, May 2, 3, 4.....
.....A. D. Wilkinson, Lincoln
Nevada Medical Association.....A. E. Hershiser, Reno
New Mexico Medical Society, Las Vegas, May 10.....
.....G. H. Fitzgerald, Albuquerque
Oklahoma State Medical Association, Guthrie, May 10, 11.....
.....E. O. Barker, Guthrie
Oregon State Medical Association.....L. H. Hamilton, Portland
Texas State Medical Association, Houston, April, 1905.....
.....I. C. Chase, Fort Worth
Utah State Medical Association, Salt Lake City, May 9-10.....
.....W. S. Ellerbeck, Salt Lake City
Washington State Medical Association, Tacoma.....A. H. Coe, Spokane
Wyoming State Medical Society, Cheyenne.....G. L. Strader, Cheyenne

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And its Constituent Societies.*

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Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

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COLORADO MEDICINE

PUBLISHED BY THE COLORADO STATE MEDICAL SOCIETY.

VOL. II.

DENVER, APRIL, 1905.

No. 4

LEADING ARTICLES

A MEDICAL COMMISSION TO EXAMINE THE INSANE.

Senate Bill No. 246, introduced into the present legislature by Dr. Robertson, providing for a change in the present methods of Court inquiries in lunacy cases, seems to meet with general approval.

The major proposed change from the present Court practice is the appointment by the County Judge of a Medical Commission of two physicians, who will examine the alleged insane person at his home or other convenient place, in the presence of an attorney at law, also appointed by the Court to sit with the Commission as guardian ad litem to protect the legal rights of the patient during the inquiry.

This commission, when appointed, will have power to examine witnesses and administer oaths if necessary, in connection with the inquest, and shall report their findings to the Judge appointing them, who will then proceed as now.

If the findings of this Medical Commission are thought to be irregular or unwarranted by facts, the accused, his guardian ad litem, or any one for him, may, within five days file an application in the County Court for a trial by jury; the present procedure in all cases.

The most commendable features of this bill are that it insures an official inquiry into a strictly medical question by medical men, instead of by a lay jury upon the testimony of lay witnesses, and that of one medical witness, who usually bases his opinion upon lay testimony at trial without previous examination. It would avoid the present necessity of holding Court at

the bedside of invalid insane, with the attending inconvenience to the Court and the mental distress to the accused and his friends, and also would obviate a public trial by process identical to that when a crime is charged, which is necessary under the present law.

As proposed in the bill, the expenses incurred through trial by commission will be less than half those allowed in lunacy inquests by the present law, and without doubt a more intelligent discrimination between the insane and those temporarily delirious from alcohol, drugs or sickness may be had.

H. W.

ETHICS IN MEDICAL ADVERTISING.

This subject is one of too great general importance and current interest to be dismissed by the simple exclusion, for the present, of advertising from our own pages. Such exclusion permits frank discussion of the theme without giving opportunity for suspicion of a desire to favor one class of advertisements as compared with another.

There are two radically different attitudes which a medical journal may take with regard to the admission of advertisements. One is, that it will sell space to any one who will pay its price to print there what he pleases, disclaiming all responsibility for what use is made of its pages. This is very much like the attitude of some landlords, who rent their property for gambling, or liquor saloons, or houses of prostitution, asking no questions so long as a satisfactory revenue is forthcoming. It is the attitude of those pawnbrokers who accept anything that is offered over the counter, if only it provides a chance of profit.

The other assumption is, that the medical journal has some responsibility for what it disseminates through its advertising pages. It requires that the matter therein contained conform to some standard of morals—its standard. Most medical journals claim to stand on this platform.

That a certain advertisement of doubtful or more than doubtful propriety is found in one journal and not in another, reveals a difference in the standard controlling these journals. Such differences depend on the ethical views of those who conduct these journals, modified, too often we fear, by the desire for journalistic "success," and by the belief that in the present condition of affairs strict ethical standards may be departed from without incurring serious loss of popularity or respect.

Under the conditions that at present surround the publication of a medical journal nothing but the vigorous assertion of the importance of a high ethical standard by those who are disinterested in the matter, can prevent the lowering of such standards by those who are constantly tempted in that direction by hope of financial benefits.

We hold that the medical journal is as much responsible for its advertising pages as for its pages of so-called scientific matter. Its responsibilities can no more be shifted upon the advertiser in the one case, than upon the writer of the paper in the other. Its advertisements should be of interest and value to the reader, or they will be worthless to the advertiser.

Much has been made of the exclusion of "reading notices" from the "scientific" pages. In so far as these are concealed puffs and claims, put forward under the false pretense of being disinterested opinions, they deserve especial condemnation. But the falsehoods they contain will continue to be falsehoods when relegated to the advertising pages, and the responsibility of the journal printing them will be diminished only so far as it is held irresponsible for its influence as an advertising medium.

For weighty reasons certain things are regarded as unethical in the practice of the physician. One of these is secrecy and mystery as to the means employed to cure or relieve his patients. The reasons for this are well indicated in the old code of ethics. If the preparation or method "be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice." Secrecy as to composition, is, perhaps, the most glaring violation of medical ethics in the nostrum advertisements found in our medical journals.

To pretend to publish formulas and methods and thus to gain the standing of an ethical preparation, while holding back any essential fact, is simply adding false pretense to the offense of secrecy. To perfect themselves in this kind of false pretense has been an object of much effort on the part of the nostrum makers. To convince themselves that the false pretense was really an honest effort at publicity has been the desire of many who manage medical journals. The success achieved by both parties to the transaction is evidenced in the advertising pages of almost any medical journal.

Another serious breach of ethics is the gross exaggeration and actual falsehood found in the nostrum advertisements of medical journals. The physician is prohibited from putting forward claims to extraordinary skill and success in the treatment of disease. The most glaring offense of the quack advertisements in the newspapers is their promises to do what any sane person acquainted with the facts knows to be impossible. Yet almost equally obvious falsehoods, of the same kind, are to be found in the advertising matter offered by the proprietors of special preparations that we find exploited in the pages of many medical journals.

Boastful claims of power to cure are especially obnoxious because the sick man is unable to judge of what is reasonable or supported by the facts. He is particularly

liable to fall a victim to false claims. But the physician in active practice, engaged in the struggle with disease, in which he daily finds his best resources inadequate, tortured by desire to do more for his patient than is possible, or by the failure of one remedy after another, is in a position very similar to that of the patient hopelessly ill. Too often he, too, is ready to catch at the straws of promise which the advertising quack of the medical journal industriously places before him.

The strong-minded doctor may disregard every claim put forward for a new remedy until it has won a recognized position in the text-books and in the daily practice of his colleagues. But that this position is not taken by a very large proportion of the profession is proven by the money spent by the proprietors of new drugs in publishing their unsupported claims to wonderful curative powers, the presentation of which claims require a large part of their expenditures for advertising. These being the facts, we hold it is the duty of those who manage a medical journal not to admit extravagant and poorly supported claims to their advertising pages any more than they would allow accounts of impossible cases or discoveries to appear in the reading pages of their journals.

Another abuse to which the advertising pages of our medical journals have contributed is the introduction to the medical profession of preparations so advertised that later they are in favorable position to be heralded to the general public, through the newspapers, or sold by the counter-prescribing druggist. This is accomplished most frequently by the wide advertising in medical journals of a copyrighted proprietary name. The physician is wise who always looks with suspicion on copyrighted names, and avoids their use even at the cost of some little inconvenience. But the profession has a right to demand that the medical journal shall not employ its advertising pages to forward this plan of making the drug manufacturers independent of the physician—of making him an opponent rather than an assistant.

These three: Secrecy, extravagant claims, and giving currency to proprietary names through their advertising pages, are the most glaring departures of the medical journals of today from sound ethics. It is for the profession to compel a greater respect for its interests and the interest of the general public in these matters: First, by freeing those journals which it controls from these faults; and then by expressing its convictions about the ethics of medical advertising in a way that even the most venal publisher will understand and respect. E. J.

NOTE AND COMMENT.

The Eastern Colorado Medical Society is the latest addition to the constituent societies of our Colorado State Medical Society. While it starts with only six members, and but few other physicians in its district from which to draw its membership, there is no reason why it should not attain successfully all the important objects of a county medical society.

In the largest organizations the success of the meetings usually depend upon two or three; and if these few workers are included in the small society its success is assured. The small society has great advantages in affording its members opportunities to become acquainted with each other and binding them together in a united profession.

Local Jealousies.—In his story of "Farmington," Clarence Darrow writes of the gossip in the village shoe shop: "When any doctor was discussed his disciples stoutly claimed that he was the best in the whole country round, while his enemies agreed that they would not let him 'doctor a sick cat.'" Surrounded by partisans of this sort, and competing in an insufficient field, is it any wonder that rival physicians distrust, dislike and even hate each other? The gnawing of professional jealousies thus engendered is probably the greatest hardship encountered in country or village practice. There is but one remedy for it; and that is, that the doctors

who would otherwise be driven asunder, shall meet, discuss together their more interesting or perplexing cases, become personally acquainted, and establish that professional sympathy, which is the greatest help and blessing to the hard working, conscientious practitioner.

Medical Legislation.—The work of the Colorado Legislature for 1905 in this direction is now completed; but not in time for intelligent comment in this issue. A summary of it and some mention of what remains to be done may claim our attention another month.

ORIGINAL PAPERS

THE EMPLOYMENT OF THE X-RAY IN THE DIAGNOSIS OF BONE AND JOINT INJURIES AND DISEASES.

By SAMUEL BERESFORD CHILDS, M. D.,
Denver.

Since the discovery by Röntgen in 1895, which enables us to trace in detail the denser structures of the interior of the body, the entire field of diagnosis of fractures and dislocations has received a very valuable aid, and the location of foreign bodies, and the detection of various obscure lesions, in both the bony and soft parts of the body, have been greatly simplified.

Naturally many errors were made in the interpretation of these shadows in the early days of the employment of the X-ray. These errors were due chiefly to inability to properly interpret the normal anatomical tracings of the bones and joints as revealed in the skiagram. But with the great improvement that has taken place in the X-ray technique in skiagraphy, associated with the knowledge gained by experience in correctly interpreting the tracings of the normal lines and shadows of all the structures in the body which are capable of making an impression upon the sensitized plate, we are

in a position at the present day to recognize abnormalities, in the position or shape of the structures, and to detect the presence of a body which is foreign to the locality in which it may be revealed by the skiagram.

It is conceded by all surgeons that there are some forms of injury to the bones, especially injuries in close proximity to the joints, in which it is impossible to make a correct and positive diagnosis by the ordinary methods of examination. Furthermore, when a fracture or dislocation has been apparently reduced in such cases and suitable dressings applied the subsequent result in the case has demonstrated that the reduction was only incomplete and a functionally crippled member for the patient has been the result. This may have been due to failure in completely reducing the fracture or dislocation, or to inability to keep the parts thoroughly immobilized, attributable either to carelessness on the part of the patient in carrying out instructions or to a lack of attention on the part of the physician in not watching closely enough the progress of the case.

Before the days of the X-ray some of the errors which were responsible for the bad results in fractures and dislocations were practically unavoidable. But at the present time, when nearly every town has access to the services of some reliable X-ray operator, bad results from remediable bone injuries, due largely if not entirely to malposition of the fragments in fractures and failure of reduction in dislocations, should become a rarity.

Before a positive diagnosis is made in cases of suspected fracture or dislocation, a skiagram should be made in at least two different positions, if possible, the antero-posterior and lateral being preferable in the majority of cases, in order not only to detect the presence of a fracture or dislocation, but also to judge correctly of the relative displacement of the bony structures. If a careful and reliable skiagraphic examination has been made, no matter how sensitive or swollen the parts may have been, we have a permanent and trustworthy record of the nature of the injury

to the bony structures. After reduction we can inspect the position of the bones from time to time to see that the ends remain accurately approximated, for the ordinary dressings in these cases, such as wood splints, or plaster of Paris casts, afford no barrier to the penetration of the ray.

In addition to the aid given by the X-ray in the diagnosis of fractures and dislocations, it has proven itself of invaluable service in the diagnosis of other bony lesions, such as tubercular foci, osteo-arthritis, osteo-myelitis, congenital malformations, necrosis, rachitis, exostoses and malignant growths.

The medico-legal aspect of skiagrams well merits the attention of the profession. As time goes on and the public becomes more familiar with X-ray pictures, it is certain that those cases of injuries about the joints which never have had a reliable examination by the X-ray, but have depended upon the usual methods of manipulation and tactile sensation for a diagnosis, unless a perfect clinical result has been obtained, so that no symptom remains as a reminder of the injury, are very liable to consult some reputable surgeon, possibly in a distant city, who will advise a skiagraphic examination, and this may reveal a condition which the patient has been assured by his attending surgeon was not present. It is certain that such a patient will not put himself out of the way to speak a good word for the reputation and skill of his former surgeon. What he is most liable to do we can all infer. Supposing in a case like this the skiagram, borne out by the clinical symptoms of the case, should indicate a condition which only some operative procedure could remedy, what would be the feeling toward the attending surgeon in this case. Again, suppose that such a case were to fall into the hands of an unprincipled practitioner. He would immediately pour forth a volume of eloquence, which had been yearning for an opportunity for utterance, and would endeavor to impress upon the patient's mind that there had been neglect of the proper treatment of his case, and prob-

ably would state that if he had treated the injury at the beginning a perfect leg or arm would have been the result. You can readily imagine that a few moments conversation along this line would sow the seeds of violent enmity against the surgeon who treated the injury in the first place, and doubtless but a short time would elapse before the seeds would have sprouted and borne their fruit. No matter how conscientiously the injury may have been treated, or how unmerited the opinion expressed, yet a most unpleasant reality is likely to confront the surgeon, namely, a suit for damages.

It is a duty which every physician and surgeon who is called upon to treat fractures and dislocations owes to himself as well as to his patient, that in every case of injury to the bones and joints, in which he cannot absolutely satisfy himself as to the exact nature of the injury, he decline to commit himself, either as regards diagnosis or prognosis, until he shall have availed himself of the additional evidence which can be furnished by the skiagram. When properly taken and interpreted, a skiagram gives most valuable information and is a permanent record of the existing conditions of the bony structures. If the condition shown is of such a nature that disability is bound to result, and the patient has been made fully cognizant of the fact, no physician could be held responsible for irreparable damage. When such a precaution has been taken, the medical and surgical profession has placed a strong barrier against that class of persons who are ever ready to malign and are always looking for recompense by threatening, if not actually by bringing against some reputable physician, one of the greatest curses to the profession, namely, the malpractice suit in fractures and dislocations.

It is very unfortunate that a reliable skiagram cannot show the amount of damage which has been done to the soft parts in close proximity to a fracture or dislocation, for we know that in some cases, due to changes incident to the injury of the soft parts, whether they be trophic, circulatory or inflammatory, these tissues never

entirely regain their functions. From this factor alone, although the bone injuries may have been perfectly repaired, a functionally imperfect result has been obtained. On the other hand, it is a fact that a perfectly reliable skiagram may reveal a fracture which has united with a slight amount of lateral deformity, or one which looks even worse, a slight antero-posterior deformity, in both of which, however, solid union may be shown; and a perfect clinical result has been obtained.



Fig. 1.

Firm union in an oblique fracture of the upper third of the shaft of the femur. A perfect clinical result, yet the skiagram shows union with some antero-posterior displacement and consequent bowing of the shaft. If shown to a jury, and the patient were to sham disability, it would be apt to prejudice the minds of the jury in favor of the patient if the result were to be judged by the skiagram alone.

If skiagrams showing these slight deformities, following upon a united fracture, were to be shown to a jury, no matter how perfect the functional result may have been, if the plaintiff can sham some disability which he attributes to the faulty union of the fracture, the minds of that jury are bound to be prejudiced in his favor if the result be judged from the skiagram alone. It is needless to say, in this connection, that any skiagram intro-

duced as evidence in the court, must be shown to have been taken by a qualified expert; and furthermore, that only an expert's interpretation is to be placed upon the condition shown. It is easy for an unqualified operator to distort the shadow which should show only a slight deformity, if any, into one which would greatly magnify the existing condition. It is also possible for a fracture to have been so perfectly united that after a lapse of a few weeks or months no sign of the line of union can be detected by the X-ray. Such a result, however, is exceptional; and in a general way it can be positively asserted that some trace of the union of the frac-



Fig. 2.

Intra-capsular fracture of the neck of the femur of three and one-half months' duration, in a boy of four years of age. Partial union with deformity and shortening of two inches. Contrast the right angle of the injured neck of the bone with the oblique angle of the normal one. No diagnosis of fracture had been made and no extension employed.

ture can be detected after a long period of time.

It should be thoroughly understood by the profession and laity in general that in this class of cases, where a question of disability after united fractures has arisen, that the clinical symptoms should far outweigh any evidence or light which the skiagram may throw upon the case; and furthermore, that the skiagram of itself, to be of value, must be judged only in connection with the clinical symptoms.

To illustrate some of the points to which I have called your attention in this paper

I have selected skiagrams from a few of the cases which have been referred to me for X-ray examination. Of the thirty-three skiagrams exhibited twenty-four revealed fractures, two of these being associated with a dislocation; four cases in this list had been assured by the attending physician that no fracture existed, and naturally no appropriate treatment for the fracture had been employed. After the lapse of a few weeks, when one would expect full recovery from a simple injury, these patients still finding considerable disability remaining, placed themselves in

formity; and even then the ultimate result will be questionable. In ten of the remaining cases the nature of the fracture had not been correctly diagnosed or disabilities had resulted from malposition of the fragments. The rest of this class of cases, eleven in number, were recent fractures referred for a diagnosis, either as to the location of the fracture or the position of the fragments.

Five cases of dislocation are exhibited. Two of these were traumatic and associated with fractures and classified under that heading. Of these traumatic disloca-



Fig. 3.

Dislocation backward of both bones of the forearm, with fracture of the external condyle and the inner trochlear surface of the humerus. Injury of fourteen weeks' duration. Dislocation had been reduced at the time of injury, but evidently had not remained in position. No skiagraphic examination had been made to verify the position. Condition shown verified by an operation, which was necessary for reduction.

the care of another physician, who advised an X-ray examination. This revealed the condition shown to you. Of these four cases one involved the ankle joint, one the knee joint and one the hip joint. (Fig. 1.) In each the resulting disability was great and will be permanent unless an operation be resorted to for the correction of the de-



Fig. 4.

Congenital dislocation of the head of the radius in a boy of 13 years, showing marked elongation of the bone and an absence of the normal cup-shaped head.

tions one was reduced by manipulation at the end of two weeks, the other (Fig. 3) by an operation after the lapse of fifteen weeks. Three of the dislocations were congenital, one of the radius, (Fig. 4) which is shown on account of the great rarity of this condition. It was reported by Dr. C. A. Powers, of Denver, in a paper before the surgical section of the American Medical Association in 1903. The case of congenital dislocation of both hips is exhibited because it was claimed by a practitioner in a neighboring state

that the dislocation had been reduced and the patient entirely cured.

From this list of fractures and dislocations, four cases have already been operated upon for practically useless limbs.

The other skiagrams shown illustrate various diseased conditions of the bones, and a brief description accompanies each one.

None of us are infallible in our diagnosis of fractures and dislocations. Therefore, it has seemed to me that the presentation of the skiagrams demonstrating the results that are obtained in these cases, might be of interest to the members of this society.

The X-ray, of itself, cannot guarantee a perfect result in fractures and dislocations, nor can it supply clinical experience in treating these cases; but it can be of invaluable aid, both in a diagnosis of the condition and in revealing the position of the fragments before and after reduction. It is a most exacting master, however, and shows no partiality in revealing the bad as well as the good results that have accrued from bone and joint injuries.

INDICATIONS FOR NEPHROPEXY

By J. N. HALL, M. D., Denver.

There is still much discrepancy in the views of various authorities as to the cases in which the fixing of a movable kidney is indicated. In many instances it is comparatively easy to form a good judgment in favor of or against such a procedure, while as to a large middle class of cases there is much uncertainty. Certainly the majority of cases demand no operation. The degree of mobility should probably influence our judgment but little as to the advisability of operation, for marked symptoms exist with but little displacement often times, and vice versa.

Amongst those cases which are distinctly non-operable, I should place, first, those in which no symptoms exist. Thus I have just prescribed for a physician for another trouble, and in the course of a routine examination I found the right kidney palp-

able in its entirety. So long as this patient does not know that he has any abnormality there and no symptoms are to be traced to it by his physician, it would obviously be folly to intervene.

The loose kidney often seen in wasting disease, notably in tuberculosis, and in the old and feeble, should likewise remain unmentioned. It has come to the surface, so to speak, merely as an incident in a general process, and in no way influences it. In somewhat similar way we find after typhoid or after confinement, a displaced kidney which disappears with convalescence. In a woman recovering from a severe attack of typhoid fever I have seen the left kidney palpable and visible in the left iliac fossa, and presenting a typical Dietl's crisis. Yet with the gain of 65 pounds of flesh it retreated to its proper position, and following a pregnancy which immediately supervened, it has remained quiescent. If a patient can be easily fattened it sometimes relieves all symptoms, in which case operation is unnecessary.

There is a rather common type of patient, generally a woman of middle age, neurotic in the extreme, often ambitious to do more than her strength permits, with constant complaints about digestion, and with frequent attacks of mucous colitis, in which floating kidney is present upon one or both sides. A general splanchnoptosis may be present. Medical treatment gives some relief, but not a cure. I have not yet convinced myself that operation would be of sufficient benefit to justify its recommendation in such cases.

There are certain cases, on the other hand, in which I believe operation should be confidently recommended, and the results will commonly justify the procedure. I should place first those in which we find symptoms of indigestion, loss of weight, and debility which leads us to the examination of the urine, this showing the presence of albumin and casts. Segregation of the urine may here show that all the trouble comes from a floating kidney. We have here doubtless a nephritis closely associated with the interference with the circulation coming from the twisting of

the pedicle of the kidney or otherwise. Whatever the theory, the anchoring of such a kidney gives most satisfactory results. I believe the stripping of the capsule has much less to do with these results than the fixation of a too movable organ. In one such case, having also chronic appendicitis, operated some three years ago by Dr. I. B. Perkins, the albumin and hyaline and granular casts, which were quite abundant, disappeared within a month, and the patient gained 25 pounds within six weeks. It may be that the whole trouble proceeded from a passive congestion of the organ; but even so, it is better to be rid of such a pathologic process. The woman has remained well, but I attribute as much to the fixation of the kidneys as to the appendectomy. In this connection we must remember that unilateral nephritis is probably vastly more common than post mortem records would indicate, for it is only those cases with double nephritis that suffer severely enough to reach the autopsy table, unless from other causes.

Those cases in which, following a fall or other injury, symptoms attributable to a floating kidney immediately supervene, should probably always receive surgical help. They are analogous to cases of traumatic rupture, and should be treated along the same lines. Thus Drs. Wetherill and McNaught have recently fixed the right kidney of a woman of 21, who first had symptoms after an injury in playing basket ball. The entire kidney was palpable and it came down so far at times as to be perceptible to her in every movement. She was so thin, and the abdomen so boat-shaped, that no bandage would keep it in place. She has made a complete recovery. A chronic inflammation of the appendix was found in this case, although it had presented no symptoms sufficient for diagnosis. This trouble should always be examined for carefully in such cases.

The occurrence of the well-known Dietl's crisis, with pain, chills and collapse, should lead to surgical intervention without unnecessary delay. If we cannot cure a kidney seriously damaged it is im-

perative to forestall further damage, by prompt operation.

In a large group of cases the floating kidney is found associated with a chronic appendicitis. I believe no satisfactory explanation of this association has been advanced; but of its frequency there is no doubt. I have known of cases in which the appendix alone has received attention from the surgeon, with little relief, and of others in which the kidney has been anchored, yet the patient failed to regain her health. Only by attention to both factors can the trouble be cleared up. Fortunately the loin incision often suffices for the treatment of both conditions; and, as I have seen them, the results are extremely satisfactory.

Many cases with gastric symptoms can be cured only by relieving the drag of a movable kidney upon the duodenum. There can be no doubt that in these cases the bowel is distorted in such a way as to interfere with the emptying of the stomach. Dilatation of this organ follows, as shown by Bartels. Occasionally a band has been found passing from the upper portion of the kidney to the duodenum, the latter organ being kinked by its tension when the kidney was displaced downward. Certain cases of temporary jaundice are due to dragging affecting the bile passages. Some of the gastralgiæ of our earlier days of practice were cases of this kind. One recent case has been so instructive to me that I shall state it briefly.

A married woman of 29, whose mother had died of phthisis, had been under treatment for six years for suspected tuberculosis of the lungs, living much of that time in the West away from her family, for climatic reasons. She was thin and very nervous, but had no cough nor expectoration. In the absence of these symptoms of course no examination for tubercle bacilli could be made. A slight dullness in the right apex, which I attributed to an attack of pneumonia many years before, had been noted by her physicians, and was diagnosed as tuberculous infiltration, in spite of the absence of other physical signs. Her chief complaint aside from

general weakness was of occasional severe epigastric pain, often followed by a "nervous chill," as she defined it. Palpitation and a feeling of oppression often came with the attacks. Slight fever was occasionally present. The whole right kidney could be grasped in the hand. When I pressed upon it she exclaimed: "Oh! that makes the very pain I always have in my stomach." The kidney was anchored by an Eastern surgeon and she has completely regained her health. There is no question in my mind that her six years of invalidism have proceeded solely from this cause.

Another class of patients who should submit to the operation is that one in which the symptoms are chiefly those of nervousness, debility and lack of ability to stand work, without marked neurasthenia. Perhaps, as in a recent case operated upon by Dr. Freeman with a brilliant result, aching pain in the kidney region, always worse after exercise, is the chief complaint. Chronic invalidism is in store for these patients if neglected.

I have seen several men whose business kept them on horseback to a greater or less extent, who could not ride ten miles without being prostrated by the pain and soreness in the side upon which a floating kidney was to be found, generally the right one, as in female patients. Unless relief can be obtained by an abdominal support, and the patient prefers this to operation, I should certainly recommend fixation in these cases. We not only cure the semi-invalidism, but avoid the danger of subsequent development of pathologic changes in the affected kidney.

Intermittent hydronephrosis is commonly followed eventually by structural damage of grave nature, and if the kidney be movable, I should favor its immediate fixation. The danger of the supervention of serious organic disease outweighs that of the operation unless some contraindication exists.

In those cases in which various nerve pains exist from pressure upon the genito-crural nerve, for example, or in which edema of the right leg arises from venous

pressure, as reported by Landan, we should recommend fixation before permanent damage is done.

The cases in which I am still in doubt, and others seem to be equally so, are those instances of pronounced neurasthenia, with great loss of flesh and most marked nephroptosis, often bilateral. Thus far there seems to be no sufficient evidence in favor of the operation, for the condition is probably an accompaniment, not a cause, of the neurasthenia. The cases with general splanchnoptosis are not amenable to relief by operation upon the kidneys alone.

Statistics in general show a mortality of little over one per cent, and relief of all symptoms in about two-thirds of the cases. Partial relief occurs in a considerable percentage of the remainder.

UNIQUE CASE OF TRAUMATIC HERNIA.

By R. W. CORWIN, M. D., Pueblo.

H. B. Aged 42 years. Weight, 180 pounds. Occupation, laborer at steel works.

While hurrying before an oncoming car to cross a track with a loaded wheelbarrow, the patient struck the track at an angle. The wheelbarrow was overturned and one of the handles struck the patient in the abdomen over the region of the spleen. The patient experienced a sharp pain, fell, became faint and nauseated, but soon recovered and returned to work, finishing his day (two hours).

During the evening pain became severe and Dr. Marmaduke, Chief of the Dispensary Staff, was called, who diagnosed ventral hernia. At this time the swelling was extensive, extending from axilla to crest of ilium, and interfered with respiration. Patient was sent to the hospital. Further examination revealed temperature 98 degrees, pulse 88, respiration 36. No operation seemed imperative, so patient was placed in bed, the bowels evacuated, and ice applied at the side; at the end of 36 hours the symptoms had improved.

The third day showed an improvement in every way except temperature, which reached 102 degrees, the highest during the patient's illness.

At the end of the second week the swelling had entirely disappeared and little tenderness remained, but when the patient stood on his feet a tumor as large as a man's fist occurred just below the ribs, midway between the axillary and median lines.

At the end of the third week the patient was operated, with the assistance of Dr. Baker, Superintendent of Minnequa Hospital; Dr. Marmaduke, Chief of Dispensary Staff, and Drs. Smith and Garwood of the Hospital Staff. A liberal horse shoe incision was made through the skin, exposing the peritoneum. All the structures between the peritoneum and skin had been completely separated for a space of three inches. The obliques were dissected back sufficiently to permit of their being overlapped to the extent of an inch and a half; the lower portion was stitched over the upper, thus fortifying the abdomen at this point with four thicknesses of muscular tissue.

The patient made a rapid and uneventful recovery, returned to his wheelbarrow, but pursued his work as one who had had experience.

THE OPERATIVE TREATMENT OF SO-CALLED MEDICAL DISEASES.

By JOHN G. SHELTON, M. D., Telluride.

During the last few years modern surgery has done much for humanity by revolutionizing the methods of treating accidents and injuries, and by improving the manner of operating in well recognized surgical conditions. But the greatest advance made by surgery has resulted from the careful observation and reasoning of men who have advocated, and practiced with success, the surgical treatment of pathological conditions that were supposed to belong to the domain of in-

ternal medicine. The profession was slow to accept the statements advising surgical treatment for so-called medical diseases, and for a time bitterly resisted the advance of modern surgical work. In the face of this opposition the pioneers of the surgery of the appendix, gall-bladder and other internal organs gradually converted those who resisted their methods, and have convinced the great majority of the profession that appendicitis, cholelithiasis and many other conditions should be treated surgically.

These successes not only stimulated operators to extend the surgical treatment to many other so-called medical diseases, but at the same time did much to lessen the objections of the internist to the progress of surgery. To-day the physician, in many instances, has not only ceased to advise against surgical treatment, but many times has preceded the surgeon in recommending operations for conditions that were supposed to be beyond the field of legitimate surgery. The suggestion of Sir Lauder Brunton to incise the valvular constriction in cases of mitral stenosis, might be mentioned as an extreme example of the change that has occurred in the opinion of the conservative internist regarding the advisability of operations.

On account of previous surgical successes and the co-operation of physicians in advocating legitimate surgical treatment, some operators have been injudicious in advising operations, and by so doing have been the cause of no small amount of just criticism of surgery in general, and have given not a few physicians the idea that too often the surgeon's only claim to distinction is his mechanical dexterity.

No small amount of injury has been done to patients and to the profession by performing operations that do not relieve the pathological condition from

which the patient suffers. On two occasions I have refused to operate on cases of epilepsy in which I could neither determine the cause of the symptoms nor a method for relieving them. Both of these cases were later operated upon, one by trephining, the other by removing the cervical sympathetic ganglia. Two years have now elapsed and both cases are gradually getting worse. Indiscriminate operations for epilepsy should be advised against. I do not believe that the results will justify the treatment. Winter (1) and Deaver (2) advise operative treatment for idiopathic cases, but give us no good reasons that would warrant us to accept their advice.

While the pathology of epilepsy is still an unwritten chapter, we shall do well to select carefully our cases for surgical treatment. The fact that certain operations have cured some cases is not sufficient for us to advise operations for epilepsy as a routine practice. The reports of the cures of epilepsy following surgical operations, do not warrant us in selecting one operative procedure for the majority of such cases. White's collection of cases shows that one operation is as apt to be followed by a cure as another. He reports recoveries following ligation of the carotid artery, tracheotomy, excision of the cervical sympathetic ganglion, incision of the scalp, circumcision, etc. These reports of isolated cases of recovery following various surgical operations, are of little value in determining the pathology and rational treatment of the disease. What we want is a classification of epilepsy based on its pathology, and a statement of the relation of the pathological changes to the symptoms.

Another disease that has been treated surgically without serious opposition, is chronic interstitial nephritis. At this time it is difficult to state positively whether the results, in some cases, do or

do not justify the operation. I am of the opinion that we should limit the operation of decapsulation of the kidneys to cases of edema of the kidney, marked tension of the kidney capsule, and certain conditions resulting from injuries and displacements; and that a patient suffering from a true, long standing, chronic interstitial nephritis in which, as Greenfield has shown, there are early destructive changes in the parenchyma of the kidney, should not be advised to have the operation done.

It is generally agreed that chronic interstitial nephritis is associated with general changes throughout the body and that there is a destruction of part of the secreting structure of both kidneys. Unilateral chronic interstitial nephritis does not occur as a permanent serious clinical entity. Litten (3), Talma (4) and Werra (5) and others, have shown conclusively that the secreting tissue of the kidneys is not capable, under any condition, of regeneration to any extent. Van Cott (6) has shown, experimentally, that stripping the capsule from the kidneys in healthy animals is followed by the formation of a firm cicatricial capsule containing only capillaries in the place of the anastomosing vessels in the normal capsule as described by Koelliker (7), and that the cortex of the kidney shows positive evidences of degeneration instead of regeneration. The statements of Tuffier (8), Kummel (9) and others, that a compensatory regeneration occurs in the parenchyma of a diseased kidney that has been decapsulated, has been conclusively disproved by Ribbert (10), Barth (11), Marchand (12), Litten, Van Cott and others. Theoretical observations clearly indicate that decapsulation can do no good in chronic interstitial nephritis.

Clinically, we are asked to believe many contradictory statements. The cases of Israel, Harrison and Pousson are

clearly not cases of chronic interstitial nephritis. The reports of Edebohls and Ferguson are not at once convincing when we remember their positive statements about unilateral chronic interstitial nephritis, and their reports of cases with urine showing from 50 to 75 per cent. of albumen. On the other hand the reports of unbiased medical men show us that we should not expect good results from operating upon cases of unquestionable chronic interstitial nephritis. Elliott (13) has collected 76 cases of chronic interstitial nephritis that were treated by decapsulation, with the following results: 36 deaths in a very short time; 26 cases temporarily improved; 2 cases rapidly failing, and no cases that showed local or general evidences of being cured. Suker's (14) carefully studied and quite complete list of cases shows nothing but absolute and complete failure when decapsulation is done in cases of chronic interstitial nephritis showing unmistakable eye changes.

The foregoing theoretical and clinical facts strongly suggest that the time has come when every physician and surgeon should advise against renal decapsulation in all advanced cases of chronic interstitial nephritis.

Operations advised and performed for advanced Bright's disease and other conditions that cannot be relieved by surgery, but are still under discussion, are excusable when compared with operations done when the diagnosis has been incorrect. Laparotomies in cases of gastric crises, or a varicocele operation on patients who have varicoceles but complain of the impotence and girdle pains of tabes, are not only injustices to the patients but are blots on the profession. These mistakes are of rare occurrence, but they should not occur at all.

There is another class of chronic sufferers, presenting themselves in increas-

ing numbers, who are suffering from neurasthenia associated with some surgical condition. These patients are desirous of getting prompt relief and most of them submit readily to operation if it is advised. I think these are our most difficult cases to diagnose properly. We know that the case is neurasthenic, and we are equally sure that the patient also has a condition that is amenable to surgical treatment—as a prolapsed kidney or uterus, a varicocele or some other readily recognized surgical condition—but many times we are unable to determine the exact cause of the symptoms. If the neurasthenia produced the symptoms, surgery would not be indicated; if the neurasthenia was a secondary condition, operative treatment would be justifiable and would give relief. This subject is an important one when we consider the number of patients who have been operated upon, not by amateurs only, but by the so-called leaders of the profession, but who still cling firmly to their original form of complaint.

I am of the opinion that fewer mistakes would be made if we would follow the classification of Dana in treating neurasthenia complicated with surgical conditions. Dana believes that neurasthenics may be divided into two great classes: 1, those in which the neurasthenia is a primary condition and depends on a change in the nervous system, and 2, cases in which the neurasthenia is secondary to pathological changes outside of the nervous system. In cases of secondary neurasthenia surgical treatment is indicated; in primary neurasthenia it is useless.

We have known for some time that neurasthenics may have displacements that do not produce symptoms. These cases furnish us the reports of renal and gynecological operations followed by no improvement. It is also agreed that a neurasthenia can occur secondary to dis-

placements and chronic inflammations. A chronic inflammation of the colon is always associated with neurasthenia. It was thought that the colitis was secondary to the neurasthenia, but now we have proof that the neurasthenia is, in many instances, secondary to the colitis and disappears when the inflammatory condition is relieved.

I believe that what is true of the colon is in part true of the stomach. Many of the conditions of the stomach, today classed as neuroses, are not primary defects of the nervous system, but depend on defective drainage of the stomach with resulting chronic inflammation and absorption of toxic material. It has been shown, by the cases of Cunningham (15), Robson (16), Fleiner (17) and Carnegie (18), that defective drainage of the stomach results in the formation and absorption of material that in some cases is capable of affecting the nervous system to such an extent as to cause tetany. Drainage of the stomach by gastro-enterostomy gave these patients complete relief. If material, sufficiently toxic to cause tetany, forms in a stomach on account of defective drainage it is possible that defective drainage of the organ is responsible for a chronic gastritis and formation of products capable of producing a secondary neurasthenia. It seems probable to me that a chronic gastritis, with or without secondary neurasthenic symptoms, can in most instances be cured by complete drainage of the stomach by gastro-enterostomy. I do not mean to say that we do not have a gastric neurasthenia as a primary condition, but I believe that stomach symptoms rarely occur in neurasthenics unless there is defective drainage of the organ.

No one has shown that marked and long standing dyspeptic symptoms have occurred in a patient whose stomach had perfect drainage. Einhorn has shown

that even complete achylia gastrica produces no stomach symptoms unless the organ is dilated or does not drain properly. I believe that the chronic dyspeptic, with neurasthenia, is rarely a neurasthenic. His symptoms are due to a stomach that has lost its muscular tone and for this reason, as Turck has shown, does not drain properly and is the seat of chronic inflammation. The inflammatory products remain in the stomach and are responsible for the gastric symptoms and for the neurasthenia. Permanent and continuous drainage, by means of a gastro-enterostomy, will relieve the great majority, if not all, of these chronic sufferers. I have operated three such cases in which the patients suffered from chronic dyspepsia, constipation and neurasthenia. The pylorus was not obstructed or narrowed in any of them. Gastro-enterostomy gave them complete relief. Other operators have had similar experiences. Murphy (19), Ochsner (20) and Mayo (21) have never seen cases of chronic dyspepsia recurring after a properly performed gastro-enterostomy.

On account of personal experiences, and the study of the reports of others, I feel justified in advising gastro-enterostomy for all cases of chronic dyspepsia that are not clearly due to plainly recognized nervous conditions, and do not depend upon definite gastric changes other than gastric atony and chronic gastritis. Gastro-enterostomy should be advised for all chronic cases of gastric atony and inflammation that resist all other less radical forms of treatment. It promises fair chances of complete and permanent relief even when the chronic inflammation has resulted in metaplasia of the gastric mucosa, as was shown in one of my cases (22) and by Futterer (23).

I believe that although we have advised surgery unwisely in some instances,

we shall continue to broaden the field of operative treatment, and that in the near future the surgery of chronic dyspepsia will not only include, as Park (24) has said, the surgery of gastric ulcer, marked dilatation, cancer, gastric anomalies, and pyloric obstruction, but will also be extended to the drainage of the atonic and chronically inflamed stomach.

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PUERPERAL SEPSIS.*

By A. F. HUTCHINSON, M. D., Durango.

Puerperal sepsis is wound infection following labor. It has been the bogey of the

obstetrician since the earliest history of medicine. The multiplied theories made from fertile imaginations regarding the pathology, would fill volumes; and in this our boasted day of precision and science, the subject seems to be still surrounded by the mists of superstition and credulity. We should be proud of the fact that our own Oliver Wendell Holmes first called attention to its contagious and infectious nature (about 1840), four years before Semmel-Weiss (about 1844) took up the idea and made practical use of it. We need not, however, be especially proud of the fact that all the prominent obstetricians of America opposed the theory very strenuously and that it took them a decade to realize its truth and value.

Hunter Robb and Burthenshaw have lately made the statement that puerperal sepsis is as common outside of maternity hospitals now as it was forty years ago. I am inclined to think that the statement is not true, as accurate statistics are very hard to obtain; and it seems reasonable to think that the introduction of the idea of surgical cleanliness, which has come into existence since that time, would reduce to a small extent, at least, the number of cases.

The disease is entirely preventable and every case speaks of culpable neglect or gross ignorance. The pathology of puerperal sepsis is very simple and is practically all given in the definition, simply "wound infection." The wound may be tear of perineum or cervix, abrasion of the vaginal wall, or the placental site may become infected. Retained portions of the placenta or membranes do not give rise to puerperal sepsis, except some infective material is introduced. The low temperatures caused by retained secundines is caused by the growth of anerobic bacteria and should not be classed as puerperal sepsis. In case the patient has gonorrhea or a pus-tube, the danger of sepsis is very great, for the discharges passing over the abraded surfaces are very liable to cause an infection; but these cases do not pre-

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sent any separate clinical picture or call for any peculiar treatment.

The severity of puerperal sepsis varies in the same way that other cases of wound infections vary, depending first upon the vitality of the patient, and second, upon the variety and virulence of the infecting organisms. Bacteria most commonly causing sepsis are the streptococcus pyogenes, staphylococcus pyogenes aureus, colon bacillus and gonococcus.

These bacteria are mostly introduced by examining fingers and syringe nozzles. The attending physician is not always the prime factor in the case. Not long since a case of my own was examined by the nurse a few days prior to confinement. The case had received my special instruction in regard to the room arrangements and all the linen had been sterilized. I had looked forward to the confinement as one to be a record breaker in the way of asepsis. I was correspondingly grateful for the kind attention of my very able assistant, Mrs. Gamp. Longer since, in a lingering labor, I was very ably assisted by one of the ladies of the vicinity who examined the case and handed in her opinion during an hour which I had stolen for another patient.

It is well to remember that these things happen, before attaching the blame to the practitioner who is unfortunate enough to have a case of sepsis. In both of these cases, I was fortunate enough to be assisted by the antiseptic fluids of the vagina, as I presume in many other cases both you and I have unconsciously been saved by the same agency.

The use of the vaginal douche after labor is a fruitful cause of sepsis, for even when used by skilled hands, the danger of infection is considerable. In the mild cases you will find the lesions limited to the vulva and vagina. In the more severe it extends to the uterus and tubes. The worst are seen when the peritoneum becomes infected. The local lesions are those of simple inflammation of the parts involved, and the constitutional symptoms are those produced by absorption of tox-

ines or the entrance of infective organisms into lymphatic or blood streams.

Not every case of elevated temperature during the puerperium should be called sepsis. There are often fevers of 102 degrees or more caused by non-septic conditions. These are, I am glad to say, more common than the real sepsis, and will, without interference, promptly subside. An elder brother in the profession was relating an experience of his a few days ago. He is the happy possessor of a formula which is useful in a variety of cases, regardless of pathology, or anything else. This formula is compounded and paced in gelatine capsules. Being summoned to the bedside of a lady of foreign birth, who had recently increased the population of this glorious republic, he found her in an exaggerated tympanitic condition, with a temperature of 103 degrees.

Diagnosis—puerperal sepsis; prognosis—death; etiology, pathology and all other ologies unknown: Treatment, private formula in gelatine capsules every three hours and flaxseed meal poultice to abdomen. Twelve hours later tympanites absent, temperature normal. "Another victory for my private formula," says the doctor. On inquiry the husband expresses in dubious English that she could not take all of the little things. Investigation reveals that this is true, for the capsules were placed under the poultice and the umbilicus is filled with the private formula; yet the patient is well.

In all cases of real sepsis the symptoms are severe. That is, there is the appearance of severe illness, with severe chills, rapid pulse, furred tongue, loss of appetite and either diarrhoea or constipation. Position in the bed is entirely passive. It is not necessary to have a high temperature in order to make a diagnosis of puerperal sepsis. Many fatal cases never have high fever. In the non-septic condition you may get the rapid pulse and the fever, but the other symptoms are not so severe, or are absent. There is nothing of diagnostic value to be gained from an ocular

examination of the discharges. In the worst cases there may be little discharge or it may be profuse. Discharge may be odorous; in fact, usually is; and all this may be true of very mild cases or of simply a case of decomposing secundines. The examination of discharges for bacteria may yield something that in the future may be of use, but for the individual case given it affords no clue to a more successful treatment nor to the differential diagnosis. This statement is also true of blood examinations, in the present state of our knowledge. In all cases where a diagnosis of puerperal sepsis is made, the interior of the uterus should be explored by the finger or dull wire curette, or both, under full anesthesia. Any foreign material should be brought away, but no force should be used, lest the zone of granulation should be broken and new avenues of infection opened. Irrigation with hot salt solution should follow, but no gauze or other foreign body should be left in the uterus or vagina to interfere with drainage. The patient should then be given a diet of milk and eggs in as great quantity as the stomach will bear, resorting to gavage if needed. Douches should be avoided as unnecessary and meddlesome. We should remember that the vaginal secretions are actively bactericidal, that the streptococcus pyogenes is destroyed in six hours when introduced into the vagina from a virulent culture: that no bacteria remain active in the vagina to exceed 36 hours, excepting the gonococcus; but when the natural secretions are interfered with by douches of plain water or solutions of mercuric chloride a much longer time is required for the inhibition of the growth of these germs (Simon), so that douches are not only useless in these cases but actually defeat the end for which they are used.

We anxiously await the day when the bacteriologist shall provide an antitoxin for every different germ which can produce sepsis, or a common one for all. Then will we aim to find the kind of infection, and having done so, will at once exhibit the proper anti-serum; but so far, I am

sorry to say, all our hopes in this direction have fallen by the wayside.

Many operations have been devised for the cure of this trouble. They offer, no doubt, a fair index of the zeal with which the active surgeon has endeavored to extend his art to the relief of human kind. This desire has led him into fields where he has been in direct opposition to the teachings of pathology and the dictates of reason—none more than here. No operative measures except that of simple incision and drainage of the cul-de-sac of Douglas are of any use in this condition.

The only scientific treatment of puerperal sepsis is the preventive, which, of course, is simply rigid cleanliness of patient, surgeon and surroundings. Every case of labor may be considered a major operation and the patient should be prepared as for laparotomy. Especial attention should be given to the cleansing of the anal region, as the colon bacillus is a common cause of trouble. The limbs should be sterilized as far down as the knees and encased in sterile coverings. The sheets, pillow cases and blankets should be sterilized and the bed and furniture wiped with a solution of mercuric chloride, 1-1000. The physician should be dressed as for operating and should wear rubber gloves. Although the touch is to a certain extent interfered with, where they are only infrequently used, by use at every opportunity you soon acquire as keen a touch as is necessary in obstetrics. The routine habit of using gloves in gynecological examinations is a very good idea, not only as an aseptic practice, but as a protective measure against syphilitic infection. The majority of men will have more or less difficulty in their use because of infrequent opportunities to become familiar with them. I have found that when I am in doubt with the gloves, if I remove them and carefully prepare the hands, make out the state of dilatation and the presentation, all subsequent examinations can be made with the gloves very easily. It is obvious that it is of little use to carefully prepare the hands and neglect to prepare the patient and surroundings, and that is ex-

actly what is done in a great many cases. The wonder is not that there are cases of sepsis, but that there are so few.

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GENIUS AND INSANITY. *

By H. T. PERSHING, M. D., Denver.

The idea that genius and insanity are closely related can be traced back through many centuries. More than two hundred years ago Dryden said:

"Great wit is sure to madness close allied,
 And thin partitions do their bounds divide."

In our own time Lombroso and his followers have defended and expounded the idea, claiming that all genius is a form of nervous disease, intimately related to insanity and epilepsy, and a sign of degeneracy. This absurd contention is the result of extremely shallow reasoning, and especially of picking out only the particular geniuses who seem to be available in support of the notion, and omitting any fair consideration of hundreds of geniuses who were eminently well balanced.

Genius is an extraordinary degree of mental power exhibited in a broad field of human activity, as in literature, art, philosophy, science, invention, engineering, military operations, etc. The mind of a genius has a greater grasp of realities outside of and independent of itself than has the common mind. If the masses and forces dealt with by astronomers were not real but only products of a clever imagination, eclipses would not occur at the time predicted, and a navigator in mid-ocean would not know the position of his ship. If Shakespeare had not known how real persons would feel and act in the situation of his varied characters, he would not have

been a dramatic genius. Insanity is a condition of mind, due either to disease or imperfect development, which unfits a person for business, social or domestic relations appropriate to his age and station. It inevitably loosens the grasp of realities.

The average insane man, if not hopelessly stupid, lives in a world of hallucinations and delusions. There is one form of insanity, however, called paranoia, formerly monomania, which consists in an elaborate and somewhat plausible delusion on one subject, generally a delusion that the patient is a victim of a conspiracy to persecute him and that he is of great importance in the world. This disease leaves the mind, for a time at least, free to act normally on subjects not connected with the delusion, and so is not absolutely incompatible with co-existing genius. Jean Jacques Rousseau, the poet Tasso, and the Italian physician and mathematician, Cardan, were genuine geniuses who suffered from this disease.

If a man happens to be even a minor genius and a paranoiac at the same time, he is sure to become known to fame, because the disease makes him aggressive, and the contrast between his sane and his insane ideas is very striking; whereas a normal man of the same ability might live and die almost unnoticed.

Of 385 geniuses in literature, science, philosophy, plastic art, music and invention, engineering, exploration and military affairs, I find that 18 have at some time in their lives (usually toward the end) been insane. The overwhelming majority have been thoroughly sane and the greatest geniuses seem to have been eminently well balanced.

Of the 18 cases of insanity many were due to disease of the brain that was probably in no way connected with the fact that the patient was a genius. Thus Emerson, Sir Joshua Reynolds and Turner were demented by the advance of age; Dean Swift and Ricardo were demented by disease extending from the ear to the brain; Pascal and Schumann were made insane by the pressure of tumors on the brain; Guy de Maupassant died of paretic

*Abstract of a paper read before Pueblo County Medical Society.

dementia, no doubt due to an infectious disease; Copernicus was demented by a stroke of apoplexy.

Very rarely insanity, instead of summarily putting an end to genius, as in the foregoing cases, combines with it and helps to shape it. Thus Bunyan's *Pilgrim's Progress* was the outcome of a fit of melancholia, and Tolstoi's philosophy of life and art has been deeply tinged by an attack of melancholia which occurred in early adult life. Schopenhauer's pessimistic philosophy certainly grew out of his diseased feelings, and he showed a strong tendency to paranoia, although perhaps not actually insane. The paranoiac tendency in Rousseau certainly modified the development of his genius.

On the other hand many paranoiacs who happened to have made a stir in the world must not be counted as geniuses. Joan of Arc was a paranoiac but had no military genius, and there have been a vast number of religious paranoiacs who have had more or less influence in history, some of whom, like Swedenborg, have had considerable ability, but not rising to the level of genius.

THE MEDICAL LAW.

To the Medical Profession of Colorado:

The proposed medical bill, heretofore printed in this journal, and since known as House Bill 148, or the Dickson Medical Bill, was passed by the General Assembly substantially as it was introduced in the Legislature. It has yet to be acted upon by the Governor. The bill as passed is a most acceptable one and will meet with the hearty approval of the profession. At an early date it will be published in full.

The contributions made to carry on the work of the committee, and the funds of the Medical Legislative League were exhausted early in the campaign; and the chairman of the Legislative League, Dr. Catherwood, and myself have advanced over \$250.00 between us to continue the fight. Members of the profession are earnestly requested to send to Dr. C. H. Catherwood, 427 Temple Court, contributions to make good the deficit.

While the new law is not ideal, it is better than should be expected under the conditions existing, and I do not hesitate in saying it is the best, and

the most equitable law of the kind on the statute books of America. Respectfully,

S. D. VAN METER,
Secretary-Treasurer State Board of Medical Examiners.

COUNTY MEDICAL SOCIETIES.

Boulder County Medical Society met as usual Thursday, March 2, 1905, at the Court House, with Dr. O. M. Gilbert presiding. The members present were Drs. Gilbert, Queal, Giffin, Campbell, Rodes, Bell, Wood, Miles, Trovillion, Harlow, Reed and Cattermode. There were many guests present. Dr. F. R. Spencer was elected to membership and the name of Dr. Dessie Robertson was proposed for membership in the society. On motion of Dr. Giffin, the Society voted to appropriate twenty dollars (\$20) for the use of the State Medical Legislative League.

Dr. Gilbert brought to the notice of the Society the proposed establishment of a slaughter-house, about a mile north of the city. After discussion of the matter by Dr. Trovillion, County Health Officer, and other members, it was decided to take no action in the matter. On motion of Dr. Cattermode, a committee of three was appointed to meet with similar committees from the Woman's Club and the University Scientific Society. The object of these committees is to formulate plans for improving the sanitary conditions of Boulder and Boulder County. Dr. Harlow explained that the special work of these committees would be to recommend methods for the prevention of tuberculosis to the health authorities, and disinfection of premises occupied by such patients. Dr. Giffin and other members concurred in these views.

Dr. E. B. Queal presented a very able paper on **Recent Work In Physiology**. He dealt with the secretion of the so-called ductless glands. Attention was first directed to how little we really know about the actions of those glands which have ducts and pour out secretions. We can examine these secretions, but we do not know how they are elaborated by the glands. Still less is known of the functions of the ductless glands, because their products pass into the blood and cannot be separated from it. The products of these glands can only be determined by maceration and extraction, or by administration of the dried gland substance to other animals. It was first discovered that when some of these ductless glands were diseased or destroyed certain quite specific derangements followed. This led to a series of experiments upon animals in which the glands were removed and the effects watched. For extent, thoroughness and

brilliant results, these researches have been surpassed by none in the history of experimental medicine.

The **thymus gland** is a temporary structure; as other glandular tissue develops, this gland atrophies. In cases of infantile atrophy, the thymus is shrunken or imperfectly developed. If it persists or increases in size, it may be the cause of sudden death.

Thyroid disease of a destructive nature results in myxedema in an adult, or in cretinism if it is a congenital condition. Herbivora can get along well without the thyroid, but in carnivora its removal proves rapidly fatal. This was later explained by the presence of a para-thyroid tissue found in herbivora; when this was removed, they showed the same symptoms as those observed in carnivora after the removal of the thyroid alone. At the present time there is uncertainty as to the causes of Graves' disease and exophthalmic goitre. They may be due to an excessive secretion of the thyroid or to atrophy of the para-thyroids.

Disease of the pituitary body is thought by some to be associated with acromegaly, but this is very doubtful.

Dr. Queal's paper was freely discussed. It was shown that where the spleen is removed, other lymphoid tissue appears to become more active and probably performs the work of the spleen.

Dr. Queal explained that the secretion from the **Islands of Langerhans**, in the substance of the pancreas, probably united with a ferment generated in muscles, and that this substance favored oxidation of sugars or glycogen. If these islands of Langerhans were destroyed the ferment in the muscle alone was not sufficient to convert the glycogen, and **diabetes** supervened. This property of the pancreatic tissue is distinct from that which elaborates pancreatic juice; the former is an internal secretion, which passes into the blood, while pancreatic juice passes through the duct of the gland into the intestine.

Dr. Rodes opened the discussion of **pneumonia** with a concise review of the subject. Some of the specially interesting points which he brought out were the influence of dry-cold atmosphere in the causation of pneumonia; also its greater prevalence in malarial regions. The question of the influence of the dry cold as an etiological factor brought out discussion as to the relative prevalence of pneumonia in the high altitudes of Colorado. Some members believed that pneumonia was more common and more fatal in the Eastern states than in this state, even at such altitudes as those of Leadville and Cripple Creek. It was suggested by others that the ozone in dry-cold atmosphere might favor the development of pneu-

monia by irritating the mucous membranes of the respiratory tract. There was much interesting discussion as to the cause of the rusty-expectoration; the effect of a dilated right heart; and as to the benefit derived from expectorant medicines.

Dr. Rodes would not treat the fever of pneumonia unless it is high—105°. Then he believes the cold bath is of benefit. He mentioned having used the bath in the case of a child who had pneumonia complicating measles. The child's temperature was 106°. He first used the graduated bath, then the Brand bath; but as the child was not relieved, he put it then into a hot pack, until the skin was read, then into cold water again and used friction, the rash remaining out after this and the child improved.

In the case of a woman 64 years of age, who had a severe attack of pneumonia, with dicrotic pulse, he first used strychnine without effect, normal salt infusions were then resorted to, and the case recovered. It was pointed out that Osborne advises against the use of salt solutions when the pulse is dicrotic. This authority advises the use of oxygen in pneumonia, while Osler doubts if it does more good than harm.

The Society adjourned to meet again April 6, 1905.

G. H. CATTEMOLE, Secretary.

Denver.—The Medical Society of the City and County of Denver met at the hall of the Denver Academy of Medicine, February 21.

Tabes, Paretic Dementia and Syphilis.—Dr. H. T. Pershing reported some cases of tabes, with remarks upon the relation of this disease to paretic dementia, and of both to syphilis. He had been impressed by the number of different ways in which tabes might present itself to the physician; and the number of mistakes that might be made regarding it. The pains may be regarded as due to rheumatism or neuralgia. The patient may come with his diagnosis ready made, asking relief from one of these affections. Of course, careful inquiry into the exact character of the pain would usually prevent any mistake. Again there may be failure of vision, and optic atrophy may be found, and no ataxia. Cases of this kind may remain free from ataxic symptoms for a long time. It seemed as if there were not enough of the disease to go round, that when it caused optic atrophy it could not cause the spinal symptoms. In other cases diplopia from paralysis of one or more of the ocular muscles might be the first evidence of the disease. He had seen a case in which bladder symptoms first attracted attention; where the patient complained that a prominent surgeon had failed to cure him of stricture. The

surgeon had soon found there was no stricture, may be taken for digestive disturbances, due to some error of diet, and the patient is usually able to tell what error of diet has caused the particular attack. The true cause of the gastric disturbance is more likely to escape recognition, because a patient lying in bed will not give evidence of ataxia, and it is not so easy to test the knee-jerk.

Neurologists generally now believe that in practically every case, tabes occurs in a person previously infected with syphilis. Ataxia affects first and chiefly the sensory neurons of the spinal cord. When a similar degeneration involves the neurons of the cerebral cortex it gives rise to parietic dementia. Neurologists believe that this disease also, practically always follows syphilis. Inoculation of the parietic demented with the virus of syphilis, has invariably failed to cause either primary or secondary symptoms of that disease. It is not rare for cases beginning as tabes to pass into parietic dementia. A case was instanced beginning as parietic dementia which seemed to be arrested for some years. After that the patient developed tabes, and later became a parietic demented. Both were to be regarded as post-syphilitic diseases, the difference between them being in the groups of neurons attacked.

Dr. J. N. Hall asked if tabes could exist with markedly increased knee-jerks. He had seen persistent gastric hyperacidity due to tabes.

Dr. E. Jackson pointed out that the squint might appear as a very early symptom of tabes, and be due rather to an inco-ordination of the ocular movements, than to an actual paralysis of any particular muscle. He cited a case in which a prominent ophthalmic surgeon urged an operation for squint. But the patient refusing, the squint soon disappeared, while other symptoms of tabes developed. He had recently seen a case complaining only of excessive lacerimation, but on investigation the patient was found to have Argyll-Robertson pupils, ataxic gait, the Romberg symptoms, complete loss of knee-jerk, and a history of lightning pains extending over 27 years.

Dr. Love asked how could we account for the freedom of women from tabes? Dr. G. H. Stover asked what ground there was for the idea that tabes was caused by taking potassium iodide for syphilis?

Dr. A. E. Midgley had seen a case in which a sore on the ball of the foot, that became irritated when the patient walked, was the first symptom. Later the symptoms of tabes developed and in six or eight months the patient was unable to stand with the eyes closed.

Dr. J. D. Gibson asked if there were a stage of tabes in which we would have increased knee-jerk

and general hyperesthesia to light touch.

Dr. G. A. Moleen mentioned a case in which the lightning pains had been felt for 24 years, the knee-jerks were gone, but the pupils still reacted to light.

Dr. E. W. Stevens had seen a case suffering from an error of refraction, increased tearing and anesthesia of the first and second division of the fifth nerve. Eventually this patient developed locomotor ataxia. The increased lacerimation was not an uncommon symptom.

Dr. Pershing said, theoretically the knee-jerks ought to be exaggerated at a very early stage, but it must be a very brief stage. Usually when he found the knee-jerks lively he gave up the diagnosis of tabes. He could not identify a condition of increased knee-jerk and hyperesthesia as one of tabes. It was more probably due to disease of the lateral and posterior columns of the cord. Transient diplopia was very often an early symptom, sometimes lasting but a day or two and forgotten by the patient. Examination for knee-jerk should be very carefully and repeatedly made, and the foot-jerk should be tested at the same time. Women rarely had tabes because a much smaller proportion of them became infected with syphilis; and also because of some especial predisposition, as certain races who were very widely infected with syphilis rarely suffered with tabes. On the other hand, women were especially liable to alcoholic neuritis, although comparatively few of them were subjects of alcoholism. He regarded the eye symptoms as of much prognostic importance. The Argyll-Robertson pupil showed that the degeneration involved the neurons at a higher level. The prognosis was better in cases in which the pupil reacted to light.

Dr. I. B. Perkins called attention to the fact that the women who were most generally infected with syphilis (prostitutes) usually did not live long enough to develop tabes.

Dr. Leonard Freeman presented a boy showing the results of operation for deformity of the ears. The unusually large ears had stood at right angles to the side of the head, constituting a very noticeable deformity that subjected their possessor to ridicule and annoyance. The deformity was remedied by removing an elliptical piece from the cartilage at the back of the ear. This piece was one-half inch wide at its broadest point, and extended well up upon the ear. The ears were left lying quite close to the side of the head without any undesirable scar.

Dr. Charles A. Powers offered some remarks on **Prognosis in Operations for Cancer of the Breast**. Recently published statistics showed a constantly increasing percentage of three-year cures, in some

cases as high as 40%. The prognosis as to operation was to be considered under three headings. The immediate danger of operation was very slight, less than 1%. The prospect for usefulness of the upper extremity was entirely good, nearly all cases gained practically normal use of the arm. The prognosis as to relapse was the most difficult and important point. He considered this under five headings: (1) The younger the patient affected with cancer the greater the danger of recurrence. (2) The form of cancer influenced the prognosis in this way: the harder the growth, the greater the preponderance of connective tissue over cells, the better the prognosis. The greater the proportion of cells the greater the danger of relapse. (3) The part of the breast affected seemed to have little influence on the prognosis. (4) The length of time that had elapsed since the growth was recognized might be expected to influence the prognosis, but while extension of the growth was unfavorable, slowness of development made the prognosis better. (5) The form of operation was important. The most complete operation gave the best prospect of permanent operation. If at the operation the top-most gland removed was found free from involvement, he considered it a very favorable sign. In all cases the parts removed should be thoroughly examined by a competent pathologist. The prognosis was absolutely bad in cases of rapid invasion of the whole gland. He believed that in recent years cancer was discovered at an earlier age, not that it was more common in younger persons.

Dr. Leonard Freeman thought operation for cancer of the breast a very discouraging subject, although recent statistics were better than the old ones. Halstead had reported over 50% of non-recurrence in three years. He did not operate on the hopeless cases, and Dr. Freeman understood that when, during operation, the case was found to be hopeless, it was not included in his statistics. Dr. Freeman did not operate when there was a strong tendency to dissemination of the growth in the skin, extensive glandular involvement, or general diffusion of the growth, or in very old persons.

Dr. John Boice thought that location did influence the prognosis. The upper segments of the breast were worse than the lower, and the upper, inner segment was worst of all. In a case of recurrence which seemed hopeless, he had done a very extensive operation, including amputation of the upper extremity. The patient had lived for five years.

Dr. I. B. Perkins had operated on patients aged 28, 31 and 32 years, in whom there had been no return at the end of 21 months. In one patient aged 33 there had been no return in three years.

In one malignant case the use of the X-ray after operation appeared to prevent recurrence in the region to which it was directly applied.

Dr. J. D. Gibson favored operation in all proper cases; but thought it should be followed by the X-ray. The danger of blood poisoning from disintegration of the tumor mass under influence of the X-ray was diminished by operation.

Dr. G. H. Stover advised immediate radical operation in all operable cases. But he would use the X-ray in cases that were inoperable, or absolutely refused operation. The ray should be used before operation to seal up the lymphatics, after operation it should be used in the hope that it would kill off any remaining infection.

Dr. W. V. Gage said the statistics in the London hospitals showed that unless the cancer was superficial, the beneficial action of the X-ray was doubtful. It seemed to lose power after passing through the tissues.

Dr. M. J. Gale called attention to the need in Colorado of an **Industrial Training School for the Adult Blind**, and to the bill providing for the establishment of such a school in Denver, now pending before the State Legislature. The present school at Colorado Springs admits none who are over 21 years of age.

Dr. E. Jackson had found in the community the hopelessly blind above 21 years seemed to be about twice as numerous as those under that age.

On motion it was resolved that the Society urge the importance of establishing a school for the industrial training of the adult blind, and asked favorable consideration of the bill for that purpose pending before the Legislature.

The Eastern Colorado Medical Association.—Upon invitation, the physicians of Yuma, Washington and Morgan counties met at Dr. McGill's office at Wray, Friday evening, March 10, 1905, to organize a medical association.

The meeting was opened by prayer by Rev. Robert Carson, and after a preliminary organization and some discussion, it was determined to permanently organize under the name and style of The Eastern Colorado Medical Association.

The following officers were elected:

Dr. E. D. McGill of Wray, President.

Dr. E. J. Bales of Wray, Vice President.

Dr. G. B. Bilsborrow of Yuma, Secretary.

Dr. N. J. Phelan of Akron, Treasurer.

Dr. Howe of Yuma county, Dr. Phelan of Washington county, and Dr. Turner of Morgan county were elected Censors.

The object of the association will be to promote sociability and fraternity among the physicians

by holding frequent meetings for the discussion of present, up-to-date treatment of diseases, and for the interchange of ideas on medical science.

The next meeting will be held at Akron, April 4, 1905.

El Paso County.—The regular monthly meeting of the El Paso County Medical Society was held at the Antlers, on Wednesday evening, March 8.

Dr. John F. McConnell was elected to membership in the Society. Dr. Frank L. Dennis called the attention of the members to the fact that an organization was being formed at this place for the purpose of employing contract physicians; and insuring to the members medical attention for a small monthly payment.

It was resolved by the members present that no member of our society could connect himself with such an organization.

Dr. D. I. Christopher read a paper entitled **A Report of Three Cases of Compound Comminuted Fractures of the Leg**. The paper was appreciated by all present as interesting, instructive and practical. The following members joined in discussing it: Drs. D. P. Mayhew, R. K. Hutchings, Chas. F. Stough, Geo. B. Boyd and others.

The President announced the following committee on arrangements for the meeting of the Colorado State Medical Society: Drs. Edward R. Neeper, chairman; C. R. Arnold, D. P. Mayhew, S. E. Solly and Will H. Swan.

M. P. Reynolds, Secretary.

Fremont County.—The regular meeting of the Fremont County Medical Society was held March 6. The Society was delightfully entertained at the home of Dr. and Mrs. Graves. After a sumptuous dinner enjoyed by all present, the meeting was called to order by President Rambo. Members present: Drs. Rambo, Cummings, Condit, Edwards, Atkinson of Florence, Williamson of Rock Vale, Canno, Craven, Moore, Little, Holmes, Wade, Graves and Phelps of Canon City.

Dr. Holmes read a paper on "Auto-Intoxication and Ptomain Poisoning," which was very helpful.

Rev. Thomas read a paper on the "Practice of Medicine as Taught in the Bible." It was much enjoyed by all present.

Dr. Graves presented a paper on "Water as a Cure in the Practice of Medicine." This was followed by a lively discussion participated in by all present. The members were about equally divided in preference as to hot or cold water for reduction of temperature. After a pleasant meeting the session adjourned.

M. E. PHELPS, Secretary.

Lake County.—A regular meeting of the Lake County Medical Society was held at the office of Dr. Maurice Kahn, March 2. There being but a few members present the reading of papers was postponed for a future meeting. The time was devoted to a report and discussion of cases.

Dr. E. A. Whitmore reported a case of appendicitis with large abscess on which he had recently operated.

Dr. E. T. Boyd reported several cases of unusual injury to the eye.

Dr. Maurice Kahn reported a case of compound comminuted fracture of the lower end of the femur.

Dr. Frederic Jackson was elected a member of the Society.

After the meeting adjourned Dr. Kahn treated his guests to a delicious and substantial lunch.

March 16.

The regular meeting was held at the office of Dr. E. T. Boyd.

The time was devoted to the report and discussion of some unusual cases. Dr. Maurice Kahn reported a case of Actinomycosis in a ranchman from the western slope.

Dr. E. A. Whitmore spoke of an unusual and interesting case of Plebitis affecting both legs.

Dr. Boyd described a case of Angioneurotic edema of the eye that had recently come under his care.

The meeting adjourned until April 6.

H. A. CALKINS, Secretary.

The Larimer County Medical Society met in the City Hall, March 1. Present: Drs. Kickland, Kerlin, Gilbert, Repogle, Morgan, Haviland, Hoel, Upson, Quick and Stuver, and Dr. Bane of Denver. In the absence of the President, Dr. Kickland presided. The minutes of the meetings of February 1 and 8 were read and approved.

Dr. Kickland gave an interesting talk, with illustrations, on "The Development of the Fetus with Special Reference to Cleft Palate."

Dr. Edward Jackson of Denver delivered a lecture on "What Can Be Done for Strabismus and When to Do It." He gave an historical resume of the subject, pointing out the more modern methods of correcting the abnormality. The lecture was illustrated by various devices, and the exercises were explained by which the strabismus can be corrected in many cases in young children. The lecture was an interesting and scholarly one and much appreciated by the physicians present. It was discussed by Drs. Bane, Kickland and Jackson. It was moved by Dr. Stuver and seconded by Dr. Haviland that a vote of thanks be extended to

Dr. Jackson for his excellent lecture. Unanimously carried. Adjourned.

E. STUVER, Secretary.

The Mesa County Medical Society met in regular session on Tuesday evening, March 7, 1905, at the office of Dr. F. R. Smith. Meeting called to order by the President, Dr. Bull. Upon roll call there were found to be seven members present with eight absentees. Minutes of previous meeting read, approved and ordered placed on file.

Dr. H. S. Day being called upon for report of a clinical case, gave the following: A **gun-shot wound occurring** in a man. The accident happened while the parties were duck hunting, and was inflicted by a charge from a shot-gun. The load of shot struck the man on the head, carrying away a portion of the scalp, two inches in width by four inches in length; while the injury to the skull measured one inch wide and four inches long. The accompanying hemorrhage was more or less profuse. The patient was wholly unconscious when the doctor reached him, and no anesthetic was required in dressing the wound. The man's friends being quite anxious as to the outcome, pressed the doctor for a prognosis, which was, very wisely, withheld.

The wound could not be closed, but was covered by hen's egg membrane, the same having been previously soaked in a 1 to 2000 solution of mercury bichloride, then by a flap of scalp.

The case progressed well, the man exhibiting no untoward symptoms until the thirteenth day, when he became delirious and the temperature reached 103 degrees. Being called at this time the doctor suspected the presence of pus. A free incision was made down through scalp and membrane to the brain substance. There was not the slightest pus formation, but was perhaps an ounce to one and one-half ounces of cerebro-spinal fluid evacuated, whereupon the symptoms at once abated. Delirium gave way to consciousness, and within 36 hours the temperature had reached practically normal and remained so. From this time the case progressed to a satisfactory termination. No medicines were administered save some C. C. pills in the beginning; and a liquid diet was observed throughout.

The doctor desired to call particular attention to the fact that a probable meningitis was averted by the prompt opening of the injury on the thirteenth day and further suggested the desirability of trephining instead of making spinal puncture in a great many cases in which it becomes necessary to relieve pressure on the brain.

The case was freely discussed by Drs. Bull, Ingersoll, Welles and others.

No further business appearing, adjournment was taken until our next regular meeting on Tuesday evening, April 4, 1905.

Otero County.—The February meeting of the Otero County Medical Society was held at La Junta, March 14. The members present were: Drs. Finney, Ragsdale, Edwards, Moore, Stubbs, Donlon, Hall and Haskins, all of La Junta; Moody of Fowler, and Griffen and Jefferey of Ordway.

Dr. Haskins spoke on "Specific Medication; Mercury as An Example." Dr. S. E. Griffen of Ordway was elected to membership. Drs. Edwards and Haskins were appointed as a committee to report to the society as to the advisability of increasing the fees prescribed by the society for contract work with the county.

Meeting adjourned to meet at La Junta, April 11.

E. GARD EDWARDS, Secretary.

Pueblo County.—The regular meeting of the Pueblo County Medical Society was held February 7, 1905, in the McClelland Library. It was an open meeting and a large crowd of doctors and friends listened to a scholarly paper upon **Genius and Insanity**, by Dr. Howell T. Pershing of Denver. An abstract of this paper appears elsewhere in this number.

A rising vote of thanks was tendered Dr. Pershing.

At the close of the opening meeting President Baker called a special meeting of members of the Society. The following resolutions were adopted:

1. This Society unanimously endorses the proposed medical bill as submitted by Dr. Catherwood, Secretary of the Colorado Medical Legislative League.

2. The Secretary is instructed to notify Pueblo county members of the Legislature of the action of the Society.

February 21.

The regular meeting of the Pueblo County Medical Society was held in the McClelland Library. The paper of the evening was read by Dr. E. W. Varley, D. D. S. Subject, **Neglect of Children's Teeth**. He spoke of the importance of proper care and preservation of the deciduous teeth; and condemned the indiscriminate extraction methods as practiced by the unscrupulous advertisers. The importance of educating the people in these matters was emphasized and the general practitioner urged to aid in the work. Casts were exhibited showing malformations caused by the neglect of the deciduous teeth, and by the thumb sucking habit of children; also casts of the same mouths, showing the remarkable changes produced by modern dental methods.

March 7.

Regular meeting held March 7, 1905, with large attendance of members.

Paper of the evening by Dr. H. G. Wetherill of Denver. Subject: "The Advantages of a Simple Surgical Equipment and Technique." A general discussion followed the reading of the paper.

This paper will appear in an early number of Colorado Medicine.

M. J. KEENEY, Secretary.

Weld County.—The regular meeting of the Weld County Medical Society was held in Dr. Law's office, Monday evening, March 27, with the president, Dr. Mead, in the chair and a number of members present. The meeting being called to order:

Dr. Pogue reported a case of **Pulmonary Tuberculosis**, in which pressure of enlarged glands on the recurrent laryngeal nerve produced a condition which resembled involvement of the larynx. These glands subsequently broke down and the contents being inhaled produced an aspiration pneumonia, at the same time there was amelioration of the laryngeal symptoms.

Dr. Hyde briefly detailed a case of **Delirium Tremens and Pneumonia**, followed by pleuritic effusion, empyema and death. Pneumococci were discovered in both sputa and exudate, being the only organism present. Autopsy revealed a pint of pus in the right pleural cavity; a heart fatty but not enlarged; liver enlarged but not fatty or cirrhotic. The patient was a man 60 years of age, with low vitality, having been addicted to alcoholic liquors for many years.

The name of Dr. W. N. Jones of Kersey, Colo., was presented for membership and favorably received.

Dr. Call gave notice of motion to change the evening of meeting to the second Monday of each month, the present time clashing with the banquet evening of the Famous Boosters' Club, members of both organizations were thus deprived of either bodily or mental sustenance.

The regular program of the evening included papers by Drs. Call and Pogue.

Dr. Call presented the **Röntgen Ray** as a therapeutic measure, giving a frank statement of his accidents, failures and successes. He found the treatment of little value in malignant diseases. But he had varying success in chronic skin diseases, papilloma, goitre and tubercular glands. The modes of operation were briefly discussed by Dr. Law and alluded to by the members.

By request Dr. Pogue read his recent article on **The Early Diagnosis of Pulmonary Tuberculosis**. This was favorably received, but as the hour was

late discussion was deferred until the next regular meeting.

C. B. DYDE, Secretary.

DENVER ACADEMY OF MEDICINE.

The first scientific meeting of this organization was held at the Hall of the Academy, Friday, February 24. The President, Dr. Henry Sewall in the chair, and about 50 Fellows present.

Developmental Alexia.—Dr. Edward Jackson reported two cases of this defect. It had been called **congenital word blindness**, but in every case so far reported vision was perfect. It was an inability to read, due to a faulty or delayed development. Hence the term alexia (inability to read) seemed more appropriate.

Case I.—A girl, 11 years old, well advanced in other branches, was very defective in her reading, and had difficulty in recognizing the letters of the alphabet; although her vision was quite perfect. After four years she had learned to read easily and well.

Case II.—A boy, aged 7, ordinarily bright and well advanced in his mental development, after several months of study was able to recognize but two letters of the alphabet, although his vision was quite normal and his eyes healthy. Under special instruction he was making rapid progress.

Altogether 19 cases had been reported, 15 occurring in boys. In only two was it known that the inability to read had continued in adult life. The defect should be recognized and the child given special, individual training. It seemed to be due to difficulty of the brain center for written and printed letters and words; or inability to co-ordinate.

Dr. H. T. Pershing pointed out that in acquired alexia or visual aphasia, the lesion would be located in the angular gyrus, on the left side for right handed persons. If both angular gyri were damaged, mind blindness would result, inability to recognize common objects. In acquired alexia the patient might still be able to write, and this was observed in some cases of congenital word blindness. The localization of the lesion in these cases was so well settled that it might be used as an indication for operation.

Dr. E. W. Stevens said that in making the diagnosis of congenital word blindness, we must take into account the general mental development of the child. The diagnosis was only justified when the ability to read was very defective, in comparison with the development of the child's other faculties. In the London schools it had been found to be not a rare condition; and special provision had been made for teaching those afflicted with it. He thought the condition was to be explained by a de-

fect of the fibres connecting the two cunei with the angular gyrus.

Dr. Henry Sewall suggested that it was not necessary to suppose an anatomic lesion. That physiologic non-conductivity would explain the condition.

Congenital Ulcer of the Stomach.—Dr. J. N. Hall reported a case in which this seemed the probable diagnosis, although the recovery of the child prevented any confirmation by autopsy. When seen at the age of 67 hours the intensely acid vomit had caused destruction of the epithelium of the face and neck. The vomited matter consisted largely of altered blood, and on five occasions considerable amounts of bright unchanged blood. The stools were dark and tarry from the first. There was no trace of bleeding anywhere else. A number of cases of congenital ulcer, found by autopsy, had been reported.

Dr. H. B. Whitney pointed out that two or three days after birth a strong tendency to hemorrhage is very frequently manifest. Hemorrhages occur in many different situations, among others in the stomach. But the tendency is to class all these cases of hemorrhage as examples of a single diseased condition. Generally no ulcer or actual lesion had been discovered.

Dr. C. D. Spivak had seen a case of vomiting of blood in a child one month old, repeated at the age of nine months. The vomiting was preceded by fretfulness and evidences of discomfort, but apparently not by the severe pain that accompanies gastric ulcer in adults. Statistics show that ulcer of the stomach is very rare under 10 years of age.

Dr. Henry Sewall said that little was known as to the character of the gastric secretion at birth. Hemorrhage in infants was rarely due to ulceration.

Dr. Hall said, in closing, that a condition could not be excluded simply because it was rare. In this case there was not only bleeding from the stomach, but extreme acidity of the gastric contents, vomiting 48 hours, and complete absence of bleeding anywhere else.

Gangrene of the Pleura; Resection of the Chest Wall.—Dr. Leonard Freeman reported a case in a man aged 35, after empyema. Resection of two ribs had previously been done and the patient said the wound had been filled with maggots. The lower lobe of the lung was found to be gangrenous, and the parietal pleura destroyed so that the inner surface of the ribs was bare. Under general treatment the patient's condition improved for a time, then improvement ceased. The following operation was done: A large horseshoe flap composed of the skin and subcutaneous tissue was dissected

up. The ribs were removed from the tubercle to the sternum, including the second rib, and the front portion of the first rib. The lower half of the scapula projecting and hindering the formation of a proper flap, was also excised. The thickened visceral layer of pleura was incised and readily peeled off to permit of lung expansion. Bleeding was comparatively slight.

Dr. C. A. Powers had found the cutting of the first rib the difficult and delicate part of such an operation. He had also noticed the absence of definite the visual impression with the memory of spoken words and their associated ideas.

bleeding.

Dr. Grant referred to the decortication of the compressed lung. He had obtained remarkable expansion after a very extensive resection of the ribs.

Dr. Freeman said the weak point in these operations was the tendency for a cavity to remain in the upper part of the wound. It was in the hope of getting this portion to close thoroughly that he had resorted to decortication, which had been accomplished without difficulty and with little hemorrhage.

Infection With Fly Larvae.—Dr. Wm. C. Mitchell read a paper on this subject. Myiasis, as the condition was called, was not so rare as might be supposed. Larval infection occurred in the eye, ear, nose and in wounds. In some of the lower animals the larvae, when eaten, were able to destroy the digestive tract.

The blow flies deposit their eggs by preference in dead animal matter, but sometimes in other situations. The bot flies deposit their eggs on the animal. The larva of the horse fly causes irritation, and when the horse bites at the part it gains entrance to the digestive tract. On the cow and sheep the skin is directly penetrated and the larva develops in a lump or mass of exudate. The blow flies develop in about 14 days, while the larval state of the bot flies lasts almost a year.

In one case a child developed six swellings on the neck, looking like boils, from each of which a larva was pressed out. In a second case there were 18 such boils containing the maggots. A third case was that of a boy who complained of rheumatic pains, and presented discolored, greenish spots of skin on the lower limbs and trunk. From areas of this kind three specimens of larvae were obtained. Connected with one of these spots on the back was a white line, eight inches long, from one scapula to the other, along which the larva appeared to have traveled just under the skin.

Dr. H. B. Whitney had seen a child 2 years old presenting an area of inflammation on the front of the neck. In this area were several small holes,

and, on watching these, larvae were seen to project and draw back again. Eight to ten of these worms were removed by catching them when they protruded, or squeezing them out, and recovery followed.

Dr. E. P. Hershey stated that in two cases he had seen the larvae were easily forced out by pressure.

Dr. C. E. Cooper stated that in Manila among the natives it was quite common to find wounds infected with maggots.

Dr. W. A. Jayne had seen a man, who while in Arizona was stung upon the thigh, and suffered for many months from what looked like a large boil. There was a small opening which discharged pus. The swelling was freely opened and cleaned out, but no larva was found at that time. Prompt healing followed.

Dr. W. B. Craig recalled that in the early seventies, in the practice of railroad surgery, it was not uncommon to find wounds infested with maggots.

Dr. G. A. Moleen had encountered diarrhea and dysentery from the eating of fly-blown meat.

Dr. Mitchell thought it was very probable in Dr. Jayne's case that the trouble had been due to the larva of one of the bot flies.

DENVER CLINICAL AND PATHOLOGICAL SOCIETY.

The regular monthly meeting of the Denver Clinical and Pathological Society was held on the evening of March 10 in the California Building.

Dr. Waxham exhibited a cast of a portion of the intestine from a male suffering from an acute attack of gastro-enteritis. Lavage and intestinal washing with turpentine and suds was done, followed by the expulsion of a tough fibrous cast of the bowels. Under the microscope connective tissue was found but no epithelium. Discussed by Dr. Freeman (who related a similar case) and Dr. Bergtold.

Dr. Coover reported a case of traumatic actaract resulting from an explosion, one foreign body being found in the right eye, while the left contained two foreign bodies, and a wound of the corneal margin, with detached retina. Skiagraphs of the case were also exhibited. Discussed by Dr. Black.

Dr. Kenney exhibited photographs of a girl of 18 years, showing a deformity of the neck caused by a growth of hair from the head to a point at the upper border of the scapula on both sides. Elliptical shaped pieces of skin and fat measuring 2x5 inches, including the hair-bearing area, were removed from both sides and in the center of the neck, thus reducing the size from 18½ to 12½

inches. A photograph showing the result was also exhibited.

Dr. Powers reported the case of a man of 30 years, with comminuted fracture of both legs (compound on one side), dying of fat embolism in 33 hours from the time of injury. Discussed by Drs. Freeman, Hill and Rogers, the latter reporting a like case, death occurring from fat embolism on the twenty-first day.

Dr. Freeman discussed the etiology of appendicitis. He thought the main factor in the causation, in about 80% of cases, was due to a shortened mesentery, which thus caused a kink in the appendix; the inflammation appearing on the distal side of the kink and interfering with drainage. Discussed by Dr. Powers, who said that in many cases the shortening was in the end of the appendix, and that in his experience the greater number of appendices were straight. Also discussed by Dr. Perkins, who found the kink present in many cases accompanied by pain, but that in the sloughing cases the kink was not visible. Dr. Freeman said that the kink was present in a majority of cases to a degree sufficient to interfere with drainage.

Dr. McNaught discussed the recent statement of an authority on appendicitis in reference to the possibility of "impotence following operation." Discussed by Dr. Perkins.

Dr. Wetherill discussed the subject of acute nephritis following abdominal operations; and reported a case post-operative to ectopic gestation, with pronounced albuminuria, urine scant and ending with complete suppression and death. Discussed by Dr. Powers, who reported the observations of Dr. J. C. Munroe of the Boston City Hospital, on post-operative albuminuria. Dr. Powers said that he believed in very thorough flushing of the bowels and kidneys preparatory to operating. Also by Drs. Bergtold and McNaught, the latter stating his belief that this condition when occurring was not always a sequence to major operations, and that in his opinion the anesthetic was responsible in many cases.

Dr. Van Zant mentioned six cases which had come to his attention where pus was present in the urine after operation, and Dr. Hall reported two pus cases followed by acute nephritis. Dr. Sewall reported his observation concerning acute indigestion, stating that he had found casts in all cases as a rule, and slight albuminuria in some. Dr. Freeman called attention to the fact that cases of albuminuria are not always preceded by surgical work, and reported the case of a woman with suppression of urine after receiving an enema. Decapsulation of the kidney was done with no relief, death following. Autopsy disclosed no

kidney lesion. But old ulcerations of the colon and rectum, together with a small perforated abscess were found. Discussed by Dr. Perkins.

Dr. Sewall reported the results of physiological experiments in clamping the renal artery in animals. A pressure of five minutes duration resulted in the production of albuminuria. Dr. Wetherill closed the discussion of the subject with the recommendation of the specific Tr. Apocynum Cannabinum, or Canadian Hemp, as a reliable diuretic.

Dr. Hall discussed **deaths from empyema** and other chest diseases, caused in many cases by reason of failure on the part of the medical attendant to recognize the condition early, not allowing operative interference to save life. He reported a number of cases.

Dr. Blaine discussed "carelessness in the diagnosis of syphilis" on the part of the medical profession.

Dr. Van Zant reported a case of sudden inspiration in a child of 9 years suffering from pertussis, and thought it due to pressure on the phrenic nerve. Discussed by Drs. Kenney and Edson, both of whom considered "habit" the probable cause in such cases.

Dr. Waxham reported a case of appendicitis in a boy of 13 years, without temperature at the time of attack or for 36 hours previous, the onset occurring abruptly without pain.

F. W. KENNEY, Secretary.

THE COLORADO OPHTHALMOLOGICAL SOCIETY.

A stated meeting of the society took place Saturday evening, Feb. 18, 1905, at the office of Dr. Geo. F. Libby, Academy of Medicine Building, Denver. Dr. Bane exhibited cases of trachoma and keratitis. Of the reported cases or unusual interest, Dr. Stevens related one of **ophthalmia neonatorum** that yielded promptly to local treatment; but in which septic arthritis followed, with death on the fifteenth day. Microscopical examination showed the gonococci in the ocular discharge, and later, in that from a suppurating ankle joint.

Dr. Jackson reported a case of **relapsing, painful erosion of the cornea**, caused by a finger nail scratch; the recurrences coming every ten days to two weeks for 2½ years. He also reported a case of **tabes** unrecognized for 27 years in spite of "lightning pains," in which epiphora, dilated pupils that reacted to accommodation but not to light, and a shuffling gait suggested this disease. There was no involvement of the optic nerve.

This society, which meets on the third Saturday of each month from October to April, inclusive, met at Dr. D. H. Coover's office, Denver, March 18, 1905. Among the interesting cases exhibited was one shown by Dr. Coover, of traumatic cataract in one eye and detachment of the retina in the other, with irido-cyclitis and softening in both, the result of the entrance into the eye of flying particles of rock, from an explosion. A prolonged and interesting discussion of foreign bodies in the eye, their detection and their removal or otherwise occurred. There were fourteen members and one visitor present at this meeting.

DEATHS.

Dr. Frank Dulin, a graduate of the St. Louis College of Physicians and Surgeons, in the class of 1882, died at the Emergency Hospital, Denver, March 13, from the effect of gun-shot wounds received in the performance of his duty as police surgeon. He was born in Kentucky in 1860, and came to Denver in 1890. In 1897 he was appointed police surgeon.

Dr. G. W. Phillips, a graduate of the Indiana Medical College of Laporte, Ind., in the class of 1846, died at his home in La Junta, March 18, of singultus, complicating an acute gastric disorder. Dr. Phillips was 83 years of age and retired from practice only within the last three years. The doctor was a forty-niner in California, a surgeon in the Civil war, and almost the pioneer physician of Southeastern Colorado. He came to Colorado in 1877, and settled in La Junta in 1884. He was the organizer of the present Otero County Medical Society, a student, and a man greatly beloved by all who knew him. One year ago he sustained a fracture of the right hip, but had so far recovered as to be able to walk with the aid of a cane.

NEWS ITEMS.

Dr. F. E. Prewitt has been appointed police surgeon in Denver, succeeding the late Dr. Frank Dulin.

La Junta Sanatorium Association.—At the first regular meeting of the Association held since the reception of the charter of incorporation, the following officers were selected for one year: President, Dr. J. F. Kearns; Vice President, E. W. Ragsdale; Secretary and Treasurer, E. G. Edwards. The company, which is incorporated for \$25,000, will proceed at once to erect a hospital and a tent colony for tubercular cases.

Mercy Hospital.—The new building of this institution is about completed. The first class of nurses, eight in number, graduated from its training school, March 6.

Free Samples.—The Denver Health Commissioner, Dr. Sharpley, is endeavoring to stop the house to house distribution of drugs as a means of advertising proprietary medicines. The packages scattered promiscuously were gathered up by children, who consumed enough to make them seriously ill.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month.....O. M. Gilbert, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Bilsborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, September and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, September and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month.....
Teller County, fourth Tuesday in each month.....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

American Medical Association

Next meeting at Portland, Oregon, July 11-14, 1905.

President:

John H. Musser, Philadelphia, Pa.

President-Elect:

Lewis H. McMurtry, Louisville, Ky.

General Secretary and Editor:

Geo. H. Simmons, 103 Dearborn Ave., Chicago, Ill.

Chairman of Committee of Arrangements:

K. A. J. McKenzie, Portland, Ore.

State Medical Societies

Place and Date of Meeting with Name and Address of Secretary.

Arizona Medical Association, Prescott, June 1-2, 1905..J. W. Foss, Phoenix
California, Medical Society of State of, Riverside, April 18-20, 1905
.....P. M. Jones, San Francisco, Y. M. C. A. Bldg.
Idaho State Medical Society, Boise, Oct. 5-6.....E. E. Maxey, Boise
Indian Territory Medical Association, Tulsa, June 20-22.....
.....R. J. Crabill, McAlester
Kansas Medical Society, Wichita, May, 1905....C. S. Huffman, Columbus
Montana State Medical Association, Butte, May 17-18.....
.....G. W. Cahoon, Butte
Nebraska State Medical Association, Beatrice, May 2, 3, 4.....
.....A. D. Wilkinson, Lincoln
Nevada Medical Association, Reno, May 9-10.....J. L. Robinson, Reno
New Mexico Medical Society, Las Vegas, May 10.....
.....G. H. Fitzgerald, Albuquerque
Oklahoma State Medical Association, Guthrie, July 10, 11.....
.....E. O. Barker, Guthrie
Oregon State Medical Association.....L. H. Hamilton, Portland
Texas State Medical Association, Houston, April 25-28, 1905.....
.....I. C. Chase, Fort Worth
Utah State Medical Association, Salt Lake City, May 9-10.....
.....W. S. Ellerbeck, Salt Lake City
Washington State Medical Association, Tacoma, Sept..A. H. Coe, Spokane
Wyoming State Medical Society, Cheyenne, Sept. 27-28.....
.....G. L. Strader, Cheyenne

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And its Constituent Societies.*

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Press of J. B. Stott & Company, 1742 Stout Street, Denver

the recorder of deeds of the county in which they intend to practice. Violation of this provision renders a license null and void.

Eleventh—The provisions of the act shall not prohibit: (a) gratuitous service in case of emergency; (b) practice of the religious tenets and beliefs of any church, when not prescribing medicines or administering drugs; nor shall they apply to: (a) surgeons of the army, navy or marine hospital service; (b) licensed physicians from other states called to attend specific cases in this state; (c) the practice of dentistry; (b) the practice of osteopathy when not prescribing medicines or administering drugs.

While the law is not exactly as an expert would write it, nevertheless, when one thinks of the numerous influences which we were compelled to consider, the profession and people of Colorado should rejoice in securing such a superior law, embodying as it does the good features of equity, practicability and operability. Those clauses relative to dentistry, the practice of the religious tenets of any church and osteopathy, are, it is true, unnecessary, being surplusage of the worst kind. However, in their meaninglessness they will not militate against the administration of the law, and in no way confer the right to any one to assume the role and offices of a practitioner of medicine. It is not practical, nor was it ever intended by the Committee on Public Policy and Legislation to enact a law that would interfere with the religious liberty clause of our bill of rights, nor one that would prevent the masseur or osteopath from healing those who sought them, so long as they did not deceive the public as being physicians and try to escape the law upon the flimsy excuse that they were not amenable to the provisions of the statute so long as they did not administer drugs or use the knife.

The State Board of Medical Examiners held their first meeting under the new law May 1, and hope to have the machinery working smoothly by the next examination (July 5, 6 and 7).

A comparison of the nauseating advertisements previous to and immediately

after April 20, shows a marked improvement for the better, although they are still a disgrace to a civilized community.

We trust that the marked success of those in charge of medical legislative matters this year will arouse to renewed activity that large number of the profession who, from repeated failure, had naturally become apathetic and unwilling to do their part in the hard, and so frequently thankless, task of medical legislation. While we have made a great step forward, it is well to remind every physician in this state that "eternal vigilance" is essential to success in this matter, as well as the "price of liberty."

The good work of the Legislative League and the several Legislative Committees should be given all encouragement and support possible, as preparation is more than half the battle, and foolish is he who thinks there will not be a strong effort two years hence to break down the good work done in this legislature.

S. D. VAN METER.

NOTE AND COMMENT.

Medical Legislation.—The Colorado Medical Law, printed in full on page 133, and Dr. Van Meter's synopsis of it given above, are worthy of careful study. The law affecting the State Board of Health; and the bill to extend the powers of the Board, which failed of passage in the House, we hope to take up next month. Senate bill No. 264, providing for a medical commission to examine the insane, which was discussed in the April number, also failed to become a law. It represents part of the good work still to be done.

The Portland Meeting.—Thirty members of the Colorado State Medical Society attended the Atlantic City meeting of the American Medical Association. Surely an equal number will be found at Portland from July 10th to 14th of this year. The pleasure of the trip will depend largely upon the company one travels in. There is little to draw aside from the regular

route, if we can agree upon the time to go, it should be easy to form a large and mutually agreeable party for the journey. All who intend going are requested to send COLORADO MEDICINE their names, the number who will accompany them, and their idea of the time for such a party to start.

ORIGINAL PAPERS

REMARKS ON THE USE OF THE ANESTHETIC SOMNOFORME.

WILLIAM L. HESS, M. D. DENVER, COLO.

Somnoforme is a new anesthetic that was originally introduced into dental surgery as a safe and efficient anesthetic for short operations. It was first described several years ago by Dr. G. Rolland.

He gives the formula of Somnoforme as follows:

Chloride of Ethyl, 60%.

Chloride of Methyl, 35%.

Bromide of Ethyl, 5%.

These constituents are each known as efficient anesthetics, but by this happy combination a mixture called Somnoforme has been elaborated that surpasses in its qualities the combined good qualities of each of its individual components. It is far superior to nitrous oxid gas as a short, safe anesthetic in that it has a shorter period of induction of anesthesia, generally thirty seconds or less, and has a period of real anesthesia from one to three minutes, which is two to four times as long as "laughing gas."

Somnoforme conforms exactly to the physiologic laws for anesthesia, that is, it produces its effects within fifteen seconds after inhalation—the time it takes a red blood corpuscle to make the complete circuit of the body from the left ventricle and through the arterial and venous system, back to the lungs. It is eliminated in the same proportion of time it takes the blood to become purified.

Somnoforme was first advocated as an

anesthetic for the dental surgeon, but lately I have become attached to it as a ready anesthetic for short operations upon the upper respiratory tract. It is easily administered and leaves no bad after effects. It only requires a special inhaler, which allows it to be given in the manner of ether anesthetization. If the operation should by chance have to be prolonged, even up to ten minutes, the anesthetic can be renewed when the signs of consciousness return. No bad after effects are seen except when we push the anesthetic too rapidly, when slight nausea may occur.

I have used Somnoforme in sixty-two operations, including two enucleations, the remainder being adenoid operations, operations for the relief of deviated septa, hypertrophied turbinates, enlarged tonsils and incisions of the ear-drum. The results have been uniformly satisfactory, excepting in one case of enucleation of the eye the reflexes could not be completely subdued. In operating for adenoids and dissections of the tonsils, the anesthetic has generally to be repeated on account of the prolonged nature of an operation of this kind. During the period of analgesia, which is about twice as long as the anesthesia, the patient will obey the command of the operator, but will feel no pain and will have no recollection of events occurring during this period.

Somnoforme can be used in a great many of the minor operations in which it is desirable to avoid shock and pain and which require from a second to a minute or two for their completion. It is especially to be recommended in operating upon the upper air passages, because no asphyxia is developed; none of the suffocating feeling which nitrous oxid gas produces; no cyanosis, no stertorous breathing, and rarely jactitation of the limbs of the patient. It is especially well borne by children because it acts quickly, and the narcosis is lasting. It is readily absorbed and as readily eliminated; the dose being 5 C. C. and in children usually about 3 C. C. With strong men it must be given in increased amounts. The same is true of alcoholics. In complicated heart and kidney troubles, where

ether or chloroform would be contra-indicated, Dr. Rolland has demonstrated that Somnoforme is well borne.

The following rules will illustrate the method of using this gas, which is administered better with the De Trey Inhaler, as much of the drug, being so volatile, becomes wasted in using the ordinary cone: When adapting the face piece, request the patient to breathe deeply and regularly, to keep the eyes open and to follow the movements of the index finger of the right hand, which should be slowly moved from side to side. After a very short space of time, it will be noted that he fails to do so. At this point, if a short narcosis is wanted, remove the face piece.

The indications of complete anesthesia are the complete flaccidity of the arms, although several cases have been reported where there was complete rigidity of the muscles during the anesthesia; drooping eyelids, dilated pupils, and a quiet snoring breathing. The conjunctival reflex, though usually absent, cannot be relied upon. As a rule, complete anesthesia is obtained only when the patient has made from twelve to fifteen inhalations. With children, six to eight inhalations will be ample.

Dr. Rolland found in experiments upon animals that the respiration ceases before the heart's action becomes impeded, consequently a close watch should be kept on the respiration, and the usual precaution of having the hypodermic syringe ready should be observed.

This agent should appeal to those who want a short anesthesia, as the patient is generally in an upright position and can walk out of the chair in a very few minutes after the operation, very rarely with any bad after-effects, and usually with a recollection of having had a pleasant dream and with a feeling of gratitude toward his physician.

THE MASTOID OPERATION—REPORTED CASES.

R. G. DAVENPORT, M. D., TRINIDAD.

In choosing the subject of this paper it has been my desire to select a theme which

may be of some interest both to the general practitioner and the special surgeon. I have, therefore, elected to write upon the mastoid operation, believing that it belongs as much to general as to special surgery.

In view of my limited experience, I shall not assume to go into the details of the technique of the mastoid operation in general, but prefer to report some cases which have come under my care, giving briefly the method of operation in each case.

For the sake of brevity, I have classified them as follows: First, cases requiring the radical operation; second, cases requiring the simple operation.

FIRST GROUP.

Case 1. *Chronic Otitis Media—Mastoiditis*.—On June 13, 1901, S., an Italian miner, aged 30, came to my office for treatment of the right ear. He gave a history of having had an attack of measles, at the age of seven, which left him with a discharging ear; otherwise he had always enjoyed perfect health. Inspection of the canal showed an extensive destruction of the membrana tympani and of the bony ring. No evidence of the malleus or incus, and in their places, protruding into the canal, was a mass of exuberant granulation tissue which was bathed in an exceedingly foul pus. There was slight tenderness over the mastoid antrum, and the patient complained of headache on that side. He could not hear the watch on contact. On account of the extensive destruction taking place in the middle ear, I advised an operation, to which he assented, but objected to going to the hospital. I therefore operated in his cabin at the mine, on the following day, doing the radical operation. The incision behind the ear was made from a point $1\frac{1}{2}$ inches above the canal, and extended downward to the tip. The periosteum was raised, the mastoid muscle detached from its insertion, and the ear cone lifted out of the canal with a small elevator. The process was opened $\frac{1}{4}$ inch posterior to the supra-meatal margin and inferior to the temporal ridge. The mastoid was a sclerotic mass of bone, which

had undergone eburnation. Before entering the antrum a misplaced lateral sinus was accidentally injured, but the hemorrhage was easily controlled by packing and gave us but little trouble. The mastoid antrum was exceedingly small and filled with pus and granulation tissue. The whole tympanic cavity was diseased, the attic, aditus and atrium containing dead bone and pus. The malleus and incus could not be found. All diseased bone, granulated tissue and pus were removed with a sharp spoon; the antrum, tympanum and external canal were converted into one large chamber. The soft parts were then stitched together with several silk sutures; a V-shaped flap made from the ear cone was pushed back into the wound, and the canal packed with iodoform gauze to hold the parts in position. The patient made an uneventful recovery. Hearing improved to the extent of hearing the watch at six inches. Six weeks after the operation there was a slight odor in the canal, but no discharge could be detected. I regret that this case has passed from my observation, and I do not know what the final result was.

Case 2. *Chronic Otitis Media—Mastoiditis*.—On May 15, 1902, Mrs. B., a young married woman, referred by Dr. Wood, presented herself for treatment of the right ear. There was a large opening posterior to the manubrium freely discharging a foul, yellowish pus. Tenderness on deep pressure over the antrum pit. Temperature normal. The ear had been discharging since an attack of scarlet fever in childhood. One week before consulting me she was taken with violent pains in the ear. A few days previous to coming to me, her mind had been wandering. At times she imagined that she was back at her old home in Iowa. She was sent to San Raphael Hospital and operated May 16, 1902. The radical operation was done the same as in case 1. The mastoid was found to be quite pneumatic. The antrum was entered very near the cortex and, immediately upon entering it, a bulging dura was discovered. The antrum and tympanic cavity seemed to be one large chamber. The inner table

between the antrum and middle cranial fossa had never been closed; or perhaps the vis medicatrix nature, during a previous attack of mastoiditis, had walled in an extra dural abscess, thus preventing the closure of bone. Pus and granulation tissue were found in the antrum and cells. I curetted away all diseased tissue, cleansed the wound thoroughly with dry gauze, and packed the canal. The woman made a speedy recovery. Her hearing was greatly improved, the discharge ceased, and her mind has been perfectly clear ever since.

Case 3. *Chronic Otitis Media—Mastoiditis*.—On May 6, 1904, H. S., aged 7, was brought to my office on account of otorrhea. Her right ear had been discharging for one month. She had no temperature. Just posterior to the head of the malleus was a small opening in the drum through which was oozing a thick pus. There was slight tenderness over the antrum. She could scarcely hear the watch on contact. An examination of the throat revealed an enlargement of both tonsils, and quite a large mass of adenoid tissue in the naso-pharynx. I removed the tonsils and adenoids, prescribed bichloride of mercury solution, 1 to 2,000, to be used in the ear, with a fountain syringe, night and morning. I saw the patient each day for two weeks, treating the ear locally with 2% nitrate of silver, and 6% iodine-vasogen. The discharge gradually diminished, and the tenderness abated nearly entirely. I told her father to keep up the irrigation of the ear, and report to me occasionally. He returned with the patient on June 7, saying she had caught cold again in the ear. There was now marked tenderness over the whole mastoid process. The ear was discharging profusely, and the pus was distinctly foul. She was markedly cachectic. The radical operation was advised and consented to, and she was operated June 8, 1904. A large incision was made behind the ear, and another 1½ inches long made from the first back toward the occiput. The mastoid was opened, and the antrum, process and tympanum were filled with pus. The dura was exposed above as in case 2, nature, I am sure, having not supplied the

bone in this child. The tip was filled with pus and granulation tissue. We removed the greater portion of the tip. The cells of the antrum and process were broken down, and all diseased bone removed. The partition was removed, and the wound packed. There was a slight discharge through the ear for about one week, after which it ceased entirely. This date, August 1, she is entirely well. Hearing normal.

SECOND GROUP.

Case 1. *Acute Otitis Media—Mastoiditis*.—On the morning of April 6, 1900, I was called to see Mrs. W., aged 38. She had been suffering for 48 hours with lancinating pains in the left ear and left side of head. There was decided tenderness over the antrum. The drum was bulging and the canal swollen posteriorly. Patient could not hear the watch with left ear. She had a temperature of 102° F. Under local anesthesia, the drum was freely incised and a large quantity of bloody serum escaped. I prescribed calomel in 1-10 gr. doses, every half hour till 2 gr. were taken, to be followed with a saline. I was called to see her again next morning at 8 o'clock. She was suffering intensely with pain in the ear, which radiated all through the left side of her head. Her temperature was 103°. Pus was escaping through the drum. I advised an operation, and at 11 o'clock the mastoid was opened. No pus was found in the mastoid cells, but they were filled with granulation tissue. Pus was found in the antrum, which was thoroughly everted. The diseased cells were broken down and drainage established between the antrum and canal. Unlike the radical operation, the bony partition between the canal and opening was not removed, but the wound was left to heal by granulation. The patient made a good recovery, the wound closing in three weeks. The ear is perfectly sound, and the hearing normal.

Case 2. *Acute Otitis Media—Mastoiditis*.—On Feb. 14, 1903, I was called in consultation with Dr. Dayton to see Mrs. Z., aged 30. Dr. Dayton had been treating her for a discharging left ear for two weeks. I found the ear discharging a

thick, viscid pus. Sharp tenderness over the antrum. Posterior wall of the canal greatly swollen. Complaining of pain in the ear constantly. Temperature 101° F. Under cocain anesthesia I incised the drum, but the discharge remained thick and scant. She could not hear the watch. She gave a history of having had similar attacks, during the winter, for several years past. I saw the case again next morning with Dr. Dayton, and on the two following days. The ear was irrigated with bichloride solution, 1 to 2,000, three or four times daily, and treated with a solution of 2% nit. of silver. She did not improve under the treatment and on the morning of February 18, 1903, at San Raphael Hospital, I opened the mastoid. The cells were full of granulation tissue. The antrum and attic contained pus. I everted away all carious bone and packed the wound with iodoform gauze. The next day her temperature had dropped to normal. On the third day the dressing was changed, and the wound found to be free from pus. On the morning of the fifth day the nurse in attendance telephoned me to come to the hospital at once as my patient had a temperature of 102°, and complained of a burning sensation about the ear. Upon removing the dressing, the auricle and parts surrounding the wound had a very marked appearance of erysipelas. It subsequently proved to be an eruption caused by iodoform gauze used in the dressing, as, with its discontinuance and a few applications of ichthyol 10% in glycerine, the eruption dried up entirely. The wound was allowed to close in three weeks and the patient dismissed from my care, in another week, as cured. Her hearing is normal in that ear.

Case 3. *Acute Mastoiditis*.—I was called June 27, 1904, to see Mrs. B., aged 64, on account of inflammation of the left ear. There had been considerable pain in the ear for five days. She had a temperature of 99½°. The drum was bulging, and there was slight tenderness over the antrum. Patient complained of fullness on that side of the head. The watch could not be heard on contact. I incised the drum

and there was a free flow of bloody serum. I saw her the following morning and she reported that her ear had discharged a teaspoonful of pus upon the pillow during the night. Her temperature was normal and she had no pain. I prescribed small doses of calomel to be taken until it produced free catharsis, and ordered her to syringe the ear with a warm solution of bichloride night and morning, and report to me at the office if there was any further trouble. In one week she came to my office, saying the ear had continued to discharge since seeing me. She had no fever, but complained of a dull, heavy feeling on left side of the head, and of complete deafness on that side. The canal was swollen and there was tenderness behind the ear. I suggested an operation, but my patient objected, pleading that I treat it a while longer before resorting to such a severe measure. She continued coming to the office for treatment, two and three times a week for two months, with her condition remaining practically unchanged. On the morning of August 28, she came into the office looking decidedly cachectic. Her temperature was $101\frac{1}{2}^{\circ}$ and the ear had stopped discharging. There was extreme tenderness over the whole mastoid. She was sent to the hospital, and on the following morning the mastoid was opened. Soon as the first chip of bone was lifted out, the pus welled into the opening and continued to flow in an almost continuous stream until the antrum was entered, which was found filled with a very dark mass of granulation tissue. The attic contained a large quantity of pus. The whole process was diseased, including the large cell in the tip, which was filled with pus. The cells were so rotten that we had to remove the mastoid process almost in its entirety. The wound at this date, September 29, is not quite closed, but the bone is filling in very fast.

OPERATIVE CASES OF CONVERGING STRABISMUS, WITH PHOTOGRAPHIC ILLUSTRATIONS.

WM. C. BANE, M. D., DENVER.

In deciding upon what operation to do

in a given case, I have been governed by the age of the patient, the duration of the convergence and the amount of the deviation. We may do a simple tenotomy on one internus, tenotomy of both internal recti, advancement of the external rectus, or tenotomy of the internal and advancement of both external recti. The tenotomy may be that of the tendon only or include all of the adjacent connective tissue. The advancement can be a tucking of the muscle to shorten it or removal of a section and securing the shortened muscle to the original point of attachment. Of the numerous advancement operations, that advocated by Dr. Melville Black is the one that I have usually done.

The result of operations for correcting strabismus are not always what we could hope for. The greater one's experience, the more guarded is his prognosis.

Case I.—J. H. E., aged 26 years, was referred to me by Dr. J. W. Anderson, in December, 1892. The patient gave a history of congenital converging strabismus of the left eye, the result, presumably, of a maternal impression. Vision of the right eye was 20-20, that of the left eye, 2-200. The convergence measured about 4 mm. The left eye was cocaineized and the internal rectus cut off including the capsule and most of the connective tissue. The result was that the eyes appeared straight and have remained so.

Case II.—L. B., aged 32 years. Vision of right eye was 6-6, that of the left 1-50. History of the left eye converging since he had whooping cough, when a child. The deviation measured $3\frac{1}{2}$ mm. The left eye was hyperopic, 2 D.

On May 27, 1893, I severed the tendon of the internus and capsule freely. The result was that the eye was quite straight, but somewhat unsteady.

Case III.—O. C., aged 12 years. History of converging strabismus of the left eye since she was 6 years old. The child stated that it followed having her head dipped in cold water as punishment for killing young chickens. The deviation was 25 centrad. Vision of the right eye was 6-6, that of the left eye, 6-20.

On March 6, 1903, under local anesthesia, I did a simple tenotomy of the left internus that corrected the strabismus. The eyes were measured and the full correcting lenses for the existing hypermetropia ordered. Six months after the operation the eyes were straight and the girl had binocular vision. See photo. No. 1.

Case IV.—W. W., aged 9 years, was referred by Dr. J. K. Miller. History of congenital convergence of the right eye. Vision of the right eye was 6-60, that of the left eye, 6-9. The convergence of the right eye measured 50 centrads. On June

measured 60 centrads. On Nov. 13, 1901, I severed the internal rectus and tucked the external rectus of the right eye. One week later I re-severed the internus. Correcting lenses were ordered. The operation was not a success, and in October, 1903, I again severed the right internus, with the result that the eyes are manifestly straight. The vision of the right eye was raised from 1-160 to 6-30.

Case VII.—L. L., aged 17 years, was referred by Dr. A. A. Blackman. Vision of the right eye 6-6, that of the left 3-60. The left eye had converged since she had scarlet

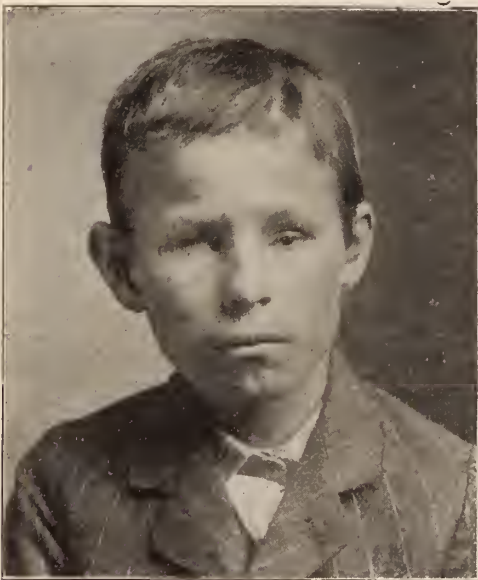


Fig. 1. J. G., aged 12, Case VIII before operation.



Fig. 2. J. G., one month after first operation.

22, 1904, under local anesthesia, I did a free tenotomy of the right internus. The deviation was overcome by the tenotomy.

Case V.—F. D., aged 19 years. He gave a history of the right eye converging since he was 4 years of age. Measurement revealed 8 mm. of convergence. On Aug. 5, 1893, I tenotomized the right internus, correcting about half of the deviation. On Feb. 3, 1894, I cut the left internus, which resulted in correcting the deviation.

Case VI.—G. B., aged 9 years. Vision with right eye was 1-160; left eye, 6-6. History of the right eye converging since she was 2 years of age. The deviation

fever, when a child. The convergence was 55 centrads. In May, 1902, under local anesthesia, I cut the left internus and advanced the externus, removing a section of the latter muscle. The result was all that could be desired. Correcting glasses were put on. The vision of the left eye was raised from 3-60 to 6-21.

Case VIII.—J. G., aged 12 years. History of congenital convergence. No history of injury. Mother was ill during pregnancy. Right eye converged 8 to 9 mm., or about 90 centrads. Vision with the right eye was 6-30, the left eye 6-21. Eyeballs were quite small and the pal-

pebral apertures narrowed. The scleral whiteness extended into the nasal margin of each cornea 2 mm. The photograph taken previous to operation shows marked convergence of the right eye. On July 6, 1904, under general anesthesia, I severed the right internus and advanced the externus, cutting off 6 to 8 mm. of the external muscle. The accompanying photograph, taken one month after the operation, shows a marked improvement in the boy's appearance. I expect to operate upon the fellow eye in about a month. See Fig. 1 and Fig. 2.



Fig. 3. P. S., aged 10, Case X, several months after second operation.

Case IX.—B. S., aged 23 years, was referred to me by Dr. John Morgan, in September, 1896. Vision of the right eye 6-9, that of the left eye 6-6. At 4 years of age the eyes began to converge. At 6 years of age the convergence became fixed and of the alternating type. The deviation was 9 mm. A free tenotomy was done on both interni, under local anesthesia, at the same sitting. The result was a correction of 5 of the 9 mm. Two weeks after the tenotomizing, I advanced the external rectus of the left eye, slightly over-

correcting the deviation. The final result was all that could be desired.

Case X.—P. L., aged 7 years, was referred by Dr. H. W. McLaughlin in March, 1900. Her vision was 6-21 with the right eye and 6-60 with the left. The first evidence of imbalance was at 3 years of age. At that time the child was accidentally struck on the head with a baseball bat. On the following day there was manifest converging strabismus. For six months the convergence was periodical, then became constant, the left eye converg-



Fig. 4. P. S., at age of 5 years showing the marked convergence of the left eye.

ing. The deviation was about 60 centrad. The eyes were measured and correcting glasses worn for six months without any improvement in the strabismus, but an increase up to 90 centrad. On May 4, 1901, under local anesthesia, I severed the left internus and advanced the externus, cutting off 5 mm. of the muscle. The effect was the reduction of the deviation to 35 centrad. The eyes were re-measured and correcting glasses put on. Twenty months after operating on the left eye I operated upon the right, under general anesthesia.

doing a tenotomy of the internus and advancement of the externus. The result was manifest correction of the deviation as shown by Fig. 4. Fig. 3 shows the same child, sometime previous to treatment. The vision with the correcting glasses is 6-9+ with each eye.

Of the above cases there were four of single tenotomy, one with double tenotomy, one with repeated tenotomy, one with tucking, two with single tenotomy and advancement, one with double tenotomy and single advancement, one with double tenotomy and double advancement.

*THE ADVANTAGES OF A SIMPLE SURGICAL EQUIPMENT AND TECHNIC.**

H. G. WETHERILL, M. D., DENVER.

B. G. A. Moynihan of Leeds, in a recent paper on gastroenterostomy, writes: "The simplest surgery, provided the desired purpose is accomplished, is the safest surgery."

I wish to make this my text for this evening and to apply it to the equipment, armamentarium and technic of the surgeon.

From the earliest days of Listerism and the performance of operations in a cloud of carbolic spray there has been an inclination to simplify surgical requirements so far as has been compatible with our better understanding of the *modus operandi* of infections and the attainment of good practical results in the routine of daily work.

Based upon the conclusions of laboratory experiments and teaching, and conformed and adapted to actual working conditions, we now accept a technic which takes cognizance of both. We concede the infecting qualities of bacteria and appreciate the bactericidal power of the blood serum and the tissues, and adopt methods which will produce the best results in the face of these opposed forces. We know that in actual practice the adoption of laboratory methods is quite unnecessary in preventing

infections and indeed that many of the chemic agents for the inhibition of bacterial growths are far more injurious than beneficial.

We now believe that wound infections arise from the direct contamination of the tissues by contact, and know that we have to deal with a material and tangible entity and that under ordinary conditions atmospheric infections do not occur and that aside from the possibility of accidentally infecting hands, instruments, dressings, etc., the environment is unimportant. Even the virulent infections of erysipelas and scarlet fever are known to be of a material character, though much more readily diffused and conveyed from place to place than others.

The acceptance of these views has led to the adoption of the most rigid precautions to prevent contact infection of wounds and has eliminated many of our most troublesome and expensive articles of equipment, and vastly simplified our work.

For example, the first to go was the carbolic spray, which was shown to be worthless as well as cumbersome and sometimes injurious. Then the phenomenally successful abdominal work of Tait, Price, Kelly, Baldy and others, done in the tenement houses of the slums of large cities demonstrated that environment had little to do with success in such cases. Some of the best surgical work done on this continent today is successfully performed in plain and unpretentious operating rooms and with but a simple and inexpensive equipment.

Much of the best work I have ever done was performed in the reception room of an eastern hospital, made ready for the occasion, and upon a simple wooden table, and I am told Dr. Halstead of Johns Hopkins Hospital still uses a wooden table. The operating room in which I now do most of my work is in an old residence, adapted to hospital purposes, and I have yet to see the first evidence of its having influenced any case unfavorably.

The essentials of a good operating room

*Read before the Pueblo County Medical Society, March 7, 1905.

and equipment appear to me to be simplicity and facility for scrupulous cleanliness. The room should be flooded with a soft diffused light without glare or deep shadows; it should be well warmed, well ventilated, without draughts or air currents, and not too large. The equipment should be simple and readily cleaned, and the basins or sinks accessible for disinfection or sterilization of every part. I can see no practical objection to a properly trapped and vented basin or sink in an operating room, and it presents very many advantages.

Plain white enameled sinks with portable basins which may be thoroughly scoured and then washed and boiled, both inside and out, are much in favor and doubtless possess many advantages over fixed bowls. They are cleaner, more readily and quickly emptied and promote the free use of soap and water and frequent changes of water.

The armamentarium, like the operating room, should be simple and easily sterilized. Many surgeons have an innate dislike for big, complicated and unwieldy instruments, and like to work with as few instruments as possible. The best abdominal work I have ever seen has been done with few and simple instruments. Such an armamentarium promotes rapidity and dexterity in our work and materially lessens the risk of contact infections. The suture and ligature material must also be simple in its preparation, and soft and strong and of no greater calibre than is absolutely necessary, particularly if it be of silk or catgut.

The sterilization of the hands of the surgeon and his assistants and of the skin of the patient has always been regarded as difficult, and many ingenious methods for attaining this end have been devised. Chemie disinfectants have been employed following a thorough mechanical cleansing with soap and water, and cultures have then been made from the surfaces only to demonstrate that from the laboratory standpoint absolute sterilization of the skin is well nigh or quite impossible. Practical every-day work has demonstrated, on the

other hand, that absolute sterilization of the skin is not necessary to successful surgery, and that many of the chemicals employed for this purpose are injurious in being irritating in and about the wound and in having a corrosive and roughening effect upon the hands of the surgeon, impairing his tactile sense and making it difficult for him to keep his hands clean and smooth.

Then, too, they give a false sense of security in that many men depend too much upon the germicidal action of a hasty dip in some chemie solution and neglect the more important mechanical cleansing, making it too brief or incomplete. Many times do we meet physicians in consultation, particularly in obstetric cases, and find them present a basin of bi-chloride solution for the hands, and yet have no hand brush or clean soap for use. How many times do we find those who have no conception of the simple but thorough way in which the soap and water and brush must be used to be effective and of the length of time necessary in their use to secure clean hands.

The tendency of today is in the direction of far greater simplification of all of these methods. The solutions of potassium permanganate, oxalic acid, chloride of lime and soda and bi-chloride of mercury are giving way to better and longer scrubbing with some good soap and a good brush, a washing in alcohol and sterile water and, in certain cases, the use of boiled rubber gloves.

Certainly none of us have improved upon the excellent results of Joseph Price and Lawson Tait, and these men depended in the main upon such simple methods. Tait used soap and water and a brush, followed by washing in pure turpentine (one of the best solvents of the fats and oils of the skin) and so removed the infecting agency from the pores and follicles.

My own method of hand preparation at this time is simple in the extreme and consists in a thorough scrubbing with soap and hot water for twenty minutes or more, rinsing in a one per cent formaldehyd solution and washing with ninety-five per

cent alcohol. In the performance of round ligament or hernia operations and certain celiotomies I use rubber gloves.

It is most important to keep one's hands clean and free from contact with infecting materials, for in this respect as in others, an ounce of prevention is better than a pound of cure. The use of rubber gloves for making dressings and examinations of infected wounds and for operations upon septic cases is, therefore, most commendable, and the routine use of them for such purposes will save one much anxiety and one's patients much needless exposure to harm.

The soap I now use was evolved and worked out at the Woman's Hospital, and has been used there for nearly three years and has proved most satisfactory. It is easily made, inexpensive and an excellent cleanser, and it leaves the hands soft and smooth and clean. The turpentine and alcohol in it dissolve the fats and empty the pores and if very hot water is used, so that the hands and arms are made to perspire, and the water is frequently changed, the sweat glands are stimulated, and the germs are washed out of their mouths.

This soap is made as follows and is called the Denver Woman's Hospital Soap:

Life Buoy soap, two bars; water, two quarts; turpentine, four ounces; alcohol, eight ounces. Cut the soap into fine shavings and boil the soap and water together until the soap is dissolved. When cool, add the turpentine and alcohol and shake well in a jar or flask.

There is also a growing disposition to do away with the elaborate preliminary preparation of the patient with the soap poultice and wet bichloride dressings once in vogue, and to depend upon a general hot bath, with particular attention to the field of operation, leaving the real cleansing of the operative field till the patient is on the table and under the anesthetic. I am told that this is the plan now followed by the Mayos of Rochester, Minnesota, and we all know the excellence of their results in all the most difficult and dangerous operative procedures.

No more important change has been

made than that which affects our treatment of the alimentary tract, before and after operations within the abdominal cavity; for it is now appreciated that purging, such as was once practiced, is injurious and ordinarily quite unnecessary before operation, if the patient has been properly dieted or fasted and the rectum and colon thoroughly flushed.

After such operations it is now believed by a large number of surgeons that purges should rarely be given, as they serve to prevent the formation of protecting barriers about the field of operation or focus of infection and promote the diffusion of the disease throughout the abdominal cavity.

Instead of stimulating peristalsis with salts and calomel and castor oil and compound cathartic pills in a mistaken effort "to eliminate the toxins," we aim to promote peristaltic arrest by prohibiting food and drink and purges, believing that in the face of an inflammation or of a threatened inflammation physiologic rest is the first and most important consideration. I have taken the position that peristaltic arrest, and even meteorism, have a very definite conservative agency, and that they should not be ruthlessly and forcibly antagonized, but treated as allies, and that, under certain circumstances, the use of opium or morphine is necessary to bring about or encourage these conservative agents, as well as for the relief of the pain the inflammatory process produces. In a paper read before the New Jersey State Medical Society last June and published in *American Medicine*, August 27, 1904, I took occasion to say:

"Let us concede that peritoneal exudation and adhesions play a very important part in protecting the patient from diffusion of infection during the acute stages of the disease, for we have all seen this exemplified many times in a walled-off appendix or tuboovarian abscess. Conceding this, can it be questioned that aperistalsis also favors the formation of a protecting barrier about the focus of infection, the very loops of the arrested intestines themselves serving to form a part of the ab-

scuss wall? Can it be questioned that meteorism, through ballooning the intestines and increasing intra-abdominal pressure, also serves the same beneficent purpose in bringing loop to loop closely about the infecting focus and splinting the abdominal wall and diaphragm so that not even the respiratory movement shall disturb the newly established quarantine station?

"The surgeon who now ruthlessly breaks down the protecting wall of an acute appendical abscess in a too zealous attempt to remove an appendix, lays himself open to censure, according to the prevailing opinion of the best surgeons of today. How much less culpable is he who in a vain attempt to eliminate a minor evil with purges, establishes active peristalsis and thus breaks down or prevents the construction of this protecting barrier in its formative stage?

"After all intra-abdominal operations the same reasoning holds good. Although we should make a great effort to empty the intestines before operating, we should do all in our power to promote peristaltic arrest after operation; for we know that under the most favorable circumstances our asepsis of hands and skin cannot be made absolute, and that there always remains a certain degree of residual infection from these sources, that the peritoneum must take care of. It is incumbent upon us to minimize the virulence of this residual infection to the utmost, through the exercise of the best known methods of antisepsis; it is also our duty to favor the natural resistance of the peritoneum to the development and distribution of the infection and its toxins. This is accomplished, among other measures, by maintaining aperistalsis.

"During the preoperating period, opium was our sheet anchor in the treatment of peritonitis, and from my standpoint it is easy to understand how its good results were attained. It promoted peristaltic arrest, and even tympanites; and in spite of its interference with the elimination of the bacterial toxins and intestinal ferments, its good efforts in localizing the infection

were paramount and far and away better than the treatment with salts and calomel and jalap.

"When peritonitis occurs and the conservative forces of nature are called upon to fortify the individual against further invasion and diffusion of the disease by exudates and adhesions, meteorism and aperistalsis, we must treat them as allies. In extreme cases measures for the control of their excessive energy may be necessary. Opium must still be regarded as a valuable remedy in the acute stages of peritonitis, as it relieves pain, conserves the energy of the patient, and promotes the peristaltic arrest which we desire.

"Practically applied, this means actual fasting for all patients threatened with or suffering from peritonitis, and soup diet for those being prepared for intraperitoneal operations. It means, also, no purges or cathartics for such patients during an attack, for some hours or a day or two before intraperitoneal operations, and for a week after operation and recovery from all symptoms of peritoneal irritation.

"For the discomforts and dangers incident to extreme degrees of meteorism and antiperistalsis, we may employ that safe and most satisfactory device, the rectal or stomach siphon, and stimulating rectal enemas containing glycerin, salts, turpentine, alum, castor-oil, etc. *I believe that no remedy is necessary or justified against simple peristaltic arrest in the small intestine, as it is wholly beneficent in its effects while it lasts, and it will be maintained only so long as it is needed.* Let it alone, and be satisfied with keeping the large hollow viscous at either end of the canal empty and free, and the rest will take care of itself, besides taking care of the infecting focus. By this same token we are driven to conclude that such poisons as strychnin, atropin, nicotin, and eserine salicylate administered for the purpose of promoting peristalsis under such conditions are also counterindicated."

There has been a further simplification of our methods in the abandonment of the use of wet bichloride towels about the field of operation, and here in Colorado, at least,

with our dry air and rapid evaporation of moisture and consequent loss of body heat, this is a very important change for the better, and is in the interest of the patient.

Irrigation of wounds and cavities is no longer indulged in as freely as of yore, and peritoneal irrigation at the time of operation has become almost obsolete, dry sponging and better hemostasis being substituted.

Drainage is also restricted in its use, particularly in the abdominal cavity, for we now appreciate the phenomenal ability of the peritoneum to take care of even considerable degrees of infection. In this connection I have long observed the extraordinary power of the omentum, when large and vascular, to take care of infections within the peritoneal cavity, and when, after operation, the omentum can be drawn down over the intestines and tacked about the focus of infection in the pelvis or about the appendix, we have utilized the best drainage device possible and a most potent conservative agent. It is far superior to tube or gauze and should always be used when the circumstances permit. Tightly tied sutures constrict the tissues, cut off the blood supply, reduce the natural resistance to infection and promote supuration. This is true particularly in hernia and round ligament operations and median abdominal incisions. The innocent cat gut is often blamed for some parietal infection due to the careless or unnecessary handling of the suture material or the tying of the sutures much too tightly.

The number of assistants is best limited to those actually indispensable to the rapid performance of the work in hand; and the surgeon should feel quite assured that each of them knows how to make his hands scrupulously clean and keep them so, that he can act quickly and intelligently in co-operation, that hemorrhage will be promptly and completely arrested and that suture and ligature material will not be unnecessarily handled or permitted to come in contact with unclean surfaces. Every assistant has ten "fingers in the pie" and the chances for contact infection may be mul-

tiplied accordingly with each unnecessary helper. The assistant must keep his hands out of the wound as much as possible and use forceps for the manipulation of sponges, sutures and ligatures, and retractors or forceps for exposing the deeper portions of the wound.

Details such as are here considered make for success or failure in our work and are quite as important as skillful and dexterous operating.

We have heard much of late of the charms of the Simple Life, but let me assure you that your comfort and happiness and contentment as surgeons, and that the welfare of your patients, will be promoted beyond measure by a conscientious and consistent adoption and advocacy of a Simple Surgical Equipment and Technic.

THE COLORADO MEDICAL LAW.

An Act to Protect the Public Health and Regulate the Practice of Medicine in the State of Colorado. Approved April 20th, 1905.

Section 1. A board is hereby established, to be known by the name and style of the State Board of Medical Examiners. Said board shall be composed of nine practicing physicians of integrity and ability, who shall be residents of, and have been duly licensed to practice medicine in this State, and who shall have been graduated from medical schools of high educational requirements and standing, and have been engaged in the active practice of their profession within this State for a period of at least five years. Said board shall perform such duties, and possess and exercise such powers, relative to the protection of the public health and the control and regulation of the practice of medicine in this State as shall be in this act prescribed and conferred upon it.

Sec. 2. The Governor shall appoint nine physicians, who shall possess the qualifications specified in section 1 of this act, to constitute the members of said board. Said members shall be so classified by the Governor that the term of office of three shall expire in two, three in four and three in six years from the date of appointment. Biennially thereafter the Governor shall appoint three members, who shall possess the qualifications as specified in section 1 of this act, each to serve for the term of six years, and he shall fill vacancies in the membership of said board as soon as practicable.

Sec. 3. Said board shall, biennially, elect a president, a vice-president and a secretary-treasurer from their membership, and adopt a seal, which shall be affixed to all licenses issued by them. They shall, from time to time, adopt such rules and regulations as they may deem necessary for the performance of their duties, and a schedule of minimum educational requirements, which shall be without prejudice, partiality or discrimination as to schools or systems of practice of medicine. When an applicant for a license offers to the board satisfactory proof that he has complied with such educational requirements as are specified in said schedule, the board shall accept such proof as sufficient evidence of the educational qualifications of the applicant to entitle him to a license without examination; Provided, however, That at no time shall said schedule for graduates after January 1, 1900, specify the attendance upon less than four full courses of instruction in four separate years in a reputable medical school. They shall keep on file with the Secretary of State, for public inspection, a copy of their schedule of educational requirements and rules and regulations.

Sec. 4. Any person wishing to obtain the right to practice medicine in this State, who has not heretofore been licensed so to do, shall, before it shall be lawful for him to practice medicine in this State, make application to said State Board of Medical Examiners, through the secretary-treasurer thereof, upon such form and in such manner, as shall be adopted and prescribed by the board, and obtain from the board a license so to do. Unless such person shall have obtained a license as aforesaid it shall be unlawful for him to practice medicine in this State; and if he shall practice medicine in this State without first having obtained such a license he shall be deemed to have violated the provisions of this act. All applicants for a license to practice medicine or for a renewal of any such license which has been revoked, shall furnish the board with satisfactory evidence of good moral character.

Sec. 5. Said board shall have authority to administer oaths, to summon witnesses and to take testimony in all matters relating to their duties. Said board shall issue licenses to practice medicine to all matters who shall furnish satisfactory evidence of attainments and qualifications under the provisions of this act and the rules and regulations of the board. Such licenses shall be signed by the president and attested by the secretary-treasurer of the board

under its adopted seal, and they shall be absolute authority to the persons to whom they are issued to practice medicine in this State. It shall be the duty of the secretary-treasurer under the direction of the board, personally or by deputy, to aid the several district attorneys of the State in the enforcement of this act and in the prosecution of all persons charged with violating any of its provisions.

Sec. 6. There shall be paid to the secretary-treasurer of the State Board of Medical Examiners by each applicant for a license a fee of twenty-five dollars (\$25.00), which shall accompany the application. Two-fifths of the fee shall be returned to the applicant in case the board shall refuse to grant him a license.

Sec. 7. Examinations of applicants for license to practice medicine shall be made by said State Board of Medical Examiners according to the methods deemed by it to be the most practicable and expeditious to test the applicant's qualifications. Such applicant will be designated by a number instead of his name, so that his identity will not be disclosed to the members of the board, until after the examination papers are graded. The subjects of written, oral or clinical examinations shall be as follows: Anatomy, physiology, chemistry, symptomatology, toxicology, pathology, surgery and obstetrics (exclusive of materia medica and therapeutics). The credentials of applicants relating to their general reputation, their preliminary education and the courses of study they have pursued; the degrees they have received; the number of years they have been engaged in the lawful practice of medicine; their experience in general hospitals, medical departments of the army, navy and public health and marine hospital service; licenses granted to them by other states and countries; and their experience as teachers of medicine, shall be given due consideration by the board in conducting its examinations. Upon investigation of an applicant's credentials the board shall, when convinced that an applicant is qualified to practice medicine, grant him a license thereon without further examination. Each applicant shall name his system of practice and no person shall use the name of any system unless he holds a certificate from the State association of such system.

Sec. 8. Every person who shall receive a license from the State Board of Medical Examiners shall have it recorded in the office of the recorder of deeds of the county in which he resides, and shall likewise have it recorded in

the counties to which he shall subsequently remove for the purpose of practicing medicine. The failure on the part of the holder of a license to have it recorded, before he shall begin the practice of medicine in this State, shall render it null and void.

Sec. 9. The recorder of deeds of each county in this State shall keep for public inspection, in a book provided for that purpose, a complete list and description of the licenses recorded by him. When any such license shall be presented to him for record he shall stamp or write upon the face thereof his signed memorandum of, the date when such license was presented for record.

Sec. 10. The State Board of Medical Examiners may refuse to grant, or may revoke, a license to practice medicine in this State, or may cause a licentiate's name to be removed from the record in the office of any recorder of deeds in the State upon any of the following grounds, to wit: The employment of fraud or deception in applying for a license, or in passing the examination provided for in this act; the practice of medicine under a false or assumed name, or the personation of another practitioner of a like or different name; the conviction of a crime involving moral turpitude; habitual intemperance in the use of ardent spirits, narcotics or stimulants to such an extent as to incapacitate for performance of professional duties; the procuring or aiding or abetting in procuring a criminal abortion; the obtaining of a fee on the representation that a manifestly incurable disease can be permanently cured; causing the publication and circulation of an advertisement of any medicine or means whereby the monthly periods of women can be regulated, or the menses, if suppressed, can be re-established; causing the publication and circulation of an advertisement relative to any disease of the sexual organs. Any person, who is a licentiate, or who is an applicant for a license to practice medicine, against whom any of the foregoing grounds for revoking, or refusing to grant, a license is presented to said board with a view of having the board revoke, or refuse to grant, a license, shall be furnished with a copy of the complaint, and shall have a hearing before said board in person or by attorney, and witnesses may be examined by said board respecting the guilt or innocence of said accused. Said board may at any time within two years from the refusal or revocation of a license or cancellation of registration under this section, by a majority

vote, issue a new license, or grant a license, to the person affected, restoring, or conferring, all the rights and privileges of, and pertaining to, the practice of medicine as defined and regulated by this act. Any person to whom such rights and privileges have been so restored shall pay to the secretary-treasurer a fee of ten dollars (\$10.00) upon the issuance of a new license.

Sec. 11. The terms, "practice of medicine," "to practice medicine," "practicing medicine" and "practice medicine," as used in this act are each hereby defined to mean holding oneself out to the public as being engaged within this State in the diagnosis and treatment of diseases or injuries of human beings; or the suggestion, recommendation or prescribing of any form of treatment for the intended palliation, relief or cure of any physical or mental ailment of any person, with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or the maintenance of an office for the reception, examination and treatment of any person suffering from disease or injury of body or mind; or attaching the title of M. D., surgeon, doctor, or any word or abbreviation to his name, indicative that such person is engaged in the treatment or diagnosis of the diseases or injuries of human beings. If any person shall hold himself out to the public as being engaged within this State in the diagnosis and treatment of diseases or injuries of human beings; or shall suggest, recommend or prescribe any form of treatment for the palliation, relief or cure of any physical or mental ailment of any person with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or shall maintain an office for the reception, examination and treatment of diseased or injured human beings; or shall attach the title of M. D., surgeon, doctor, or any other word or abbreviation to his name indicative that he is engaged in this State in the treatment of diseased or injured human beings; and shall not in any of these cases, theretofore have received, or shall not in any of these cases, then possess, in full force and virtue, a valid license to practice medicine under the laws of this State, he shall be deemed to be practicing medicine without complying with the provisions of this act and in violation hereof. Nothing in this act shall be construed to prohibit gratuitous service in case of emergency, nor the practice of the religious tenets or general beliefs of any church whatsoever,

not prescribing medicine or administering drugs, nor shall it apply to commissioned surgeons of the United States army, navy, or public health and marine hospital service, while so engaged, nor to regularly licensed physicians called from other states or territories to attend specific cases in this State, nor the practice of dentistry, nor the practice of osteopathy when not prescribing medicine, or administering drugs.

Sec. 12. Any person practicing medicine in this State, without complying with the provisions of this act, or any person who shall have violated the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than fifty dollars (\$50.00), nor more than three hundred dollars (\$300.00), or by imprisonment in the county jail for not less than ten (10) days nor more than thirty (30) days, or both. Any person presenting or attempting to file as his own, the diploma or certificate or credentials of another, or who shall give either false or forged evidence of any kind to the State Board of Medical Examiners, or any member thereof, in connection with an application for a license to practice medicine, or who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by imprisonment in the State Penitentiary for a term of not less than one (1) year, nor more than ten (10) years, at hard labor.

Sec. 13. All fees received by the State Board of Medical Examiners and all fines collected by any officer of the law under this act, shall be paid to the secretary-treasurer of said board, who shall, at the end of each and every month, deposit the same with the State Treasurer, and the said State Treasurer shall place said money so received in a special fund to be known as the fund of the State Board of Medical Examiners, and shall pay the same out on warrants drawn by the Auditor of the State therefor, upon vouchers issued and signed by the president and secretary-treasurer of said board. Said moneys so received and placed in said fund may be used by the State Board of Medical Examiners in defraying their expenses in carrying out the provisions of this act. At the end of every biennial period, if there shall remain in said fund any balance, said balance shall be transferred to the general revenue fund of the State. The secretary-treasurer of

said board shall keep a true and accurate account of all funds received and all vouchers issued by the board; and on the first day of December of each year he shall file with the Governor of the State a report of all receipts and disbursements for said board for the preceding fiscal year. Members of said board shall receive a per diem for the time during which they shall be actually engaged in the discharge of their duties; and the secretary-treasurer shall receive a salary; said per diem and salary shall be fixed by the board, and together with other expenses shall be paid out of the fund of the State Board of Medical Examiners.

Sec. 14. The State Board of Medical Examiners shall meet as a board of medical examiners in the city of Denver, on the first Tuesday of January, April, July, and October of each year, and at such other times and places as may be found necessary for the performance of their duties.

Sec. 15. Justices of the peace and all courts of record in the State of Colorado shall have full jurisdiction over and power to enforce the provisions of this act.

COUNTY MEDICAL SOCIETIES.

Boulder.—The Boulder County Medical Society met in regular session Thursday, April 6, 1905, at the Court House, with President O. M. Gilbert in the chair. The members present were Drs. Reed, Miles, Campbell, Wood, Rodes, Giffin, Gilbert, Trovillion, C. A. and G. H. Cattermole. There were a number of guests present. Dr. Dessie Robertson would have been elected to membership but she had not yet registered in the county. The name of Dr. Ida S. Herr was proposed for membership.

Dr. L. M. Giffin presented the paper of the evening, his subject being **infantile club-foot**. Dr. Giffin spoke in substance as follows: There are two forms of club-foot, the congenital and the acquired. It is with the congenital form that I wish to deal, and especially with the treatment of the congenital form. As far as is known this condition is due to mechanical causes, that is, a constrained position in utero.

The different forms of club-foot seldom occur pure, but usually as a combination of two or more forms. The chief symptoms are the deformity and lameness.

The appropriate treatment of club-foot will depend on the time when treatment is begun. If this is postponed until the child is several years old, tenotomy, forcible straightening, and

retention in a plaster cast, or possibly removal of some bone, may be necessary. The younger the child, the easier it is to correct the deformity. A few days after birth, the foot can be slowly pushed back into a position of over-correction, without giving the child pain. This pressure must be made slowly, otherwise the opposing muscles come into action.

The longer treatment is delayed, the greater the deformity becomes, for the strong muscles grow stronger and pull the foot further out of correct position; the deformity is also increased by pressure when the child begins to walk. It is the custom of the essayist to begin the treatment a few days after birth. He retains the foot in a position of over-correction by means of a very light and simple splint. This apparatus is made of two pieces of copper plate, one piece cut to fit the sole of the foot, the other to fit the calf of the leg. These two plates are connected by a piece of copper wire. The wire is soldered to each plate, and must be long enough so that it can be bent free of the heel. Dr. Giffin bandages the plates on firmly, one to the sole of the foot, the other to the calf of the leg; then forces the foot into the desired position, bending the wire at the same time. The wire must be heavy enough to retain the foot in the corrected position. This apparatus weighs about $3\frac{1}{2}$ ounces. The item of weight is an important one, for the child must exercise that limb in order to prevent atrophy of the muscles.

Another important feature of the treatment is to teach the nurse or mother how to apply the apparatus, as the splint should be removed, and the muscles massaged for fifteen minutes, each night and morning.

If this treatment is carried out, and it usually is carried out faithfully by the anxious mother, it results in cure; so that by the time the child walks, no apparatus is needed. If the foot tends to turn, the side of the shoe can be stiffened, or the splint can be applied at night.

During the discussion of the paper, the fact was brought out that in these cases of club-foot the toes tend to turn in; Dr. Giffin said this was due to a twist in the bones of the leg or even in the femur, and that it can be corrected by massaging the legs to the knee, or even above, and twisting the bones back into the proper position.

Under the head of **clinical reports**, a case was mentioned where a **tuberculous patient** had taken the "copper cure" for six months. After three months of the treatment he began

raising **calcareous masses**. This was four years ago, but he still raises some of these masses. Altogether there have been more than two hundred of the concretions expectorated. The question was raised as to whether these were due in any measure to the "copper cure." Some members had seen similar phenomena in patients who had taken no such "cure."

Attention was called to the method of **anesthetizing ulcers**, by means of a freezing mixture (ice and salt), before curettement; also for anesthetizing areas where the cuticle is to be removed for skin grafting. In the case mentioned, which was treated at University Hospital, there was no pain in curetting the ulcer, which was $7 \times 3\frac{1}{2}$ inches in area. After the skin grafting, the ulcer healed over, with the exception of three small places.

On motion the Society adjourned to meet again May 4, 1905.

G. H. CATTERMOLLE,
Secretary.

Denver.—The regular meeting of the Medical Society of the City and County of Denver was held Tuesday evening, March 7, at the hall of the Denver Academy of Medicine.

Principles of the Treatment of Asthma was the subject of a paper by Dr. Robert Levy. In the absence of any knowledge of a definite pathological lesion, its treatment was necessarily empirical and largely dependent upon theory. The principle theories were those of (1) Salter, that it was due to spasm of the bronchial muscular tissue. (2) Weyman, the vaso-motor theory, the fault being in the nerves controlling the vessels of the bronchial mucous membrane. (3) Voltolini, that it was a reflex disorder excited by morbid conditions in the nose. (4) Francis, that it was caused by instability of the respiratory center, and that this center depended for its stability upon conditions arising from a certain portion of the nasal septum.

Levy would classify cases into those due (1) to general causes; (2) diseases of the nose; (3) diseases of other organs, as the heart or pelvic organs; (4) those in which both general and local causes co-operated, and (5) those for which no obvious cause, general or local, could be discovered.

Nasal stenosis might be complete without causing asthma; but certain conditions, especially enlarged turbinates might cause it. The ordinary tests of such an origin—spraying the nose with cocaine, or adrenalin—were not to be relied upon. Removal of sometimes quite small abnormalities in the nose, gave such relief that the patients would return again and again, hoping for similar

benefit from further nasal treatment. In his experience cauterizing the nasal septum after the method of Francis had not given a favorable result in a single case. All possible methods of investigation should be resorted to in the effort to give relief.

Dr. H. B. Whitney said the cases seen in our hospitals were inveterate and hopeless. He had found them to be benefited only by morphia or some similar drug for the attacks, and the administration of small doses of potassium iodide, or the more agreeable syrup of hydriodic acid. In bronchitic cases, heroin, stramonium, etc., were of benefit. The most valuable remedy was climatic change. Many cases were freed from the disease for many years by coming to Colorado. He had encountered large numbers of such cases among applicants for life insurance, who seemed here to be in perfect health.

Dr. M. Black had never seen much benefit from inter-nasal operations for asthma. Once in a while the correction of some nasal condition would give great relief. Many of these patients had nasal polypi. But he could never satisfy himself with regard to close association of these with the asthma.

Dr. Simon spoke of the importance of paying attention to diet. He also had seen good results among young adults from coming to live in Colorado.

Dr. Hall said many people were sent to Colorado with the diagnosis of asthma, when no asthma was present; but dyspnoea due to cardiac or pulmonary disease. Many young people were relieved by change of climate. When not benefited in one locality they might be in another. Where a climate, at first beneficial, seemed to lose its influence, he had seen the patient again relieved by moving to a somewhat higher altitude. He called attention to the great benefit in some cases from the hypodermic use of adrenalin.

Dr. Gage had tried changes of climate and extensive operations on the nose without benefit. He had only been relieved by the adrenalin. But he had suffered severe and alarming symptoms of collapse from the injection of adrenalin into a vein.

Dr. Levy, closing the discussion, said there was a limited field for usefulness for the rhinologist in the treatment of this disease. The influence of climate was extremely important, but there was no way to determine what climate would be beneficial except by trial. Pure bronchial asthma was commonly relieved. He had known a patient from the East relieved of his asthma by coming to Denver. After a few years it returned; but was again relieved by removal to Leadville. Some

years later it recurred, but again disappeared when he came to reside in Denver. Subsequently it again gave trouble and the patient returned to the East, where he had now lived for some years without any attacks. Diet, also, like climate, must be used empirically.

The Early Diagnosis of Pulmonary Tuberculosis was the subject of a paper by Dr. G. R. Pogue of Greeley. He said the burden of this necessarily rests on the shoulders of the general practitioner the family physician. Not only should the diagnosis be made at the earliest possible moment, but the patient and his family should be at once informed of the nature of the disease. Without this it was impossible to secure proper treatment for the patient or to insure the necessary precautions for preserving health if it were restored. The proper instruction of the patient would also prevent him from becoming a source of infection to others. If early recognized, consumption was curable. Many cases were unrecognized, or the patient was kept in ignorance of his condition, until too late to be helped, and then sent here to die. The public must be educated as to the signs and importance of early tuberculosis.

The negative result of microscopic examination was not at all conclusive. Bacilli would not usually be found in the sputum until the case had progressed to the breaking down of tissue, liberating the bacilli. We must learn to recognize at the earliest possible moment the invasion of the bacillus. Every case had a small beginning. The best guide to the early recognition of the disease was the thermometer. An afternoon elevation of temperature or a subnormal temperature should awaken suspicion. In doubtful cases he resorted to use of tuberculin.

Dr. Hall felt it was more important to have the patient recover than to be sure of the diagnosis. The large number of doctors affected with pulmonary tuberculosis come to Colorado because they have the sputum examined, and the condition recognized early. Of course, the diagnosis could not be based upon a single suspicious symptom.

Dr. Van Zant said that the importance of early diagnosis was illustrated by the statistics of the National Jewish Hospital. When it was first opened all sorts of cases were sent to it. But later the patients were carefully examined by competent men before being sent from home, so that only early cases were received. The first year there had been 20 deaths; the second year 6; the third year 4; the fourth year 4; the fifth year none. He believed that hemoptysis was commonly the initial symptom and after that a little persistent fever. The tubercle bacillus was found in only two-thirds of the early cases. He did not

use tuberculin, believing it somewhat dangerous and not accurate or trustworthy. He thought the potassium iodide test ought never to be resorted to. He attached great importance to soft rales, and a slight prolongation and raising of pitch in the respiratory murmur in some part of the lung.

Dr. Rothwell had found a valuable symptom in a quick frequent pulse, for which no appreciable cause could be found.

Dr. Whitney attached great importance to hemorrhage, but he had seen three cases in which no other symptoms had developed, although a year had elapsed. He thought the diagnosis by tuberculin might be complicated by the presence of some focus of tubercular infection outside of the lungs. Statistics showed that such foci were present in many persons.

Dr. Denison bore testimony to the value and innocuousness of the tuberculin test. He had used it in 53 cases and believed it entirely harmless in the early stage. The smallest doses giving the characteristic reaction should be employed. It was of great value because you had complete control of the case when you knew it was tubercular in its incipency.

Dr. Levy found local anemia of the larynx very suggestive of tuberculosis, although not sufficient to base a diagnosis upon. Laryngeal paresis could not be regarded as giving specific indications.

Dr. Beggs said the tuberculin test gave a reaction when there was an active focus present in the body, one containing living bacilli. The temperature change indicating tuberculosis was not necessarily a fever. A sub-normal temperature with a daily rise of $1\frac{1}{2}$ degrees should lead us to suspect tuberculosis.

Dr. Pogue, in an extensive experience with tuberculin, had seen no bad result from its diagnostic use. Microscopic evidence of consumption meant that the case had proceeded so far that the lung was already breaking down.

Dr. W. V. Gage called attention to simple devices of wood, the pot label and the skewer, to avoid the possible carrying of infection from patient to patient, by the ordinary tongue depressor or applicator.

Dr. J. D. Gibson reported a case of brachial neuritis following injury. The pain, which had continued for several months, was relieved by applications of static electricity; first using a brush discharge over the afflicted area, and later the eruptive discharge.

March 21st.

The stated meeting of the Medical Society of the City and County of Denver met in the Academy of Medicine Hall, March 21st.

Acute Otitis Media in Infancy and Childhood was the subject of a paper by Dr. H. B. Whitney, who wished to call attention to the difficulty and importance of the recognition of this condition in infancy. It was nearly always a febrile affection. The child was often fretful and might show evidences of local discomfort. But often no such evidences were present, and there was nothing to call attention to the ear until a purulent discharge showed that the drum membrane had been ruptured. The symptoms might be those of very grave disease; coma, indications of severe pneumonia, or meningitis. He believed the general practitioner should be always on the alert for otitis media, and something of an adept in its recognition.

In any child showing fever for a day or two without obvious cause, the ear should be examined as much as a matter of routine as the mouth, throat, lungs or stomach. No dependence could be placed upon efforts to elicit local pain by pulling or pressure about the ear. Any child was apt to resent such manipulations whether soreness was present or not. The only safe method was to examine the meatus and drum membrane with head mirror and speculum. For this purpose a dark room with kerosene lamp, one person to hold the child, and another to steady the head were needed. Often the meatus had to be cleaned by douching with warm water before a good view could be obtained. At best it was difficult to see the drum membrane. Often one could only get a glimpse of the posterior inferior quadrant. Yet this might be sufficient for a diagnosis, showing either the normal appearance or the changes of middle-ear inflammation.

Dr. C. E. Edson emphasized the point that absence of any sign of pain or tenderness about the ear could not be relied upon as diagnostic. He had seen a girl of four, who denied any pain or discomfort about the ear, but subsequently confessed this had been present. She had concealed them because somebody had told her that if she had earache "the doctor would come and punch a hole in her ear."

Dr. G. F. Libby thought that evidences of involvement of the lower posterior quadrant might be sufficient for a diagnosis. But it would be better if the upper part of the membrane could be inspected for signs of disease in the attic. There was also the condition of tubo-tympanic catarrh, shown by congestion along the manubrium; in which case there was no reason for opening the drum membrane.

Dr. D. S. Neuman thought that with otitis

media in children there was always pain. The disease was likely to affect one ear and might be of traumatic origin.

Dr. W. W. Grant asked as to the frequency of mastoid involvement, and at what age it might be expected?

Dr. Whitney, in closing the discussion, said that mastoid involvement had been rare in his experience so that he could not fix any age for it. He had wished to call attention to these points: (1) That there might be absence of all evidence of pain. As to this he must disagree with Dr. Neuman. (2) That the general practitioner, if he would properly serve his patrons, must possess some skill in the examination of the ear.

Carcinoma of the Colon with a report of the case. Dr. W. W. Grant pointed out that this condition was likely not to be recognized. The tumor might be mistaken for the corresponding kidney. It was not likely to be painful until late in its course. The obstruction of the bowel caused no very marked symptoms, until that obstruction became complete. It was of rather mild malignancy, running its course in from 2 to 6 years. Hence it offered a good prospect of cure by early operation.

His patient, a woman aged 42, had for six years a tumor near the left iliac crest, diagnosed by several physicians as floating kidney. When first seen, in consultation, there was complete obstruction of the bowel with usual symptoms. This went on to the third day before operation was permitted. The distention was enormous. Colostomy was done at the cecum, followed by prompt recovery from operation. But in a few days severe pain commenced in the growth, and three weeks after the first operation, at the request of the patient and her husband, he operated for removal of the growth, removing the mass, and bringing the two ends of the colon together by a large Murphy button covered in by sutures. The patient recovered from the operation and was free from pain, but ten days later there was pain at the pit of the stomach. Emaciation continued and she died five weeks after the second operation from general carcinomatosis. He urged that the radical operation should not be done during complete obstruction. The specimen removed was exhibited.

Dr. Leonard Freeman said there was no darker chapter in surgery than that of carcinoma of the colon. These cases were not seen until total obstruction occurred. Often the patients had never noticed any serious abdomi-

nal symptoms. In many cases the growth could not be detected by palpation. He had learned that the only proper procedure was to first make an artificial anus, then later resect the intestine to remove the growth. He thought the ends could best be brought together by the Magraw ligature, reinforced by sutures. It was absolutely essential to have the safety valve afforded by the artificial anus. Without it the contents of the intestines would be certain to force apart the cut ends, no matter how they had been joined.

Dr. W. A. Jayne narrated a case, which appeared to be one of rather mild obstruction. Abdominal section showed it was carcinoma. The growth was removed by resection. The cut ends were united by a large Murphy button, but in spite of great care the bowel gave way at the point of union on the third day, illustrating the necessity of pursuing the course recommended by Dr. Freeman.

Dr. J. D. Gibson thought that for the treatment of abdominal cancer, surgeons were not paying enough attention to the use of the X-rays. It was not the depth of the cancer that prevented cure by X-ray, but the difficulty of drainage which was less for cancer in any part of the alimentary canal. He believed the cancer could be destroyed at any depth. The danger was from sepsis following the destruction of deep growths. He believed that all such cancers should be treated by the X-ray, whether operated upon or not.

Dr. G. H. Stover said, that in his experience favorable results from X-ray for growths inside of the body are few. He thought that all operable cases should be operated. If supposed cancer of the stomach were cured by the X-ray, he would suspect the diagnosis. He would not think it were cancer without the report of a good pathologist; and then he might wonder if the pathologist had made a mistake.

Dr. Grant said that the cure of internal cancer by the X-ray was quite at variance with his observation and that of others. He had recently talked on the subject with Pusey, of Chicago, who sent all such cases first for operation. In a similar case, he would not again use the Murphy button, but would use sutures, uniting each coat separately.

Diphtheria.—Dr. J. N. Hall reported a case that began with violent vomiting. On the third day a very small area of membrane was discovered in the throat. A very large dose of antitoxin was given. But later paralysis of the muscles of swallowing appeared, and the action

of the heart became slow (15 or 20 beats per minute), and irregular. The boy died at the end of 9 days, having been quite pulseless at the wrist for 36 hours.

Dr. C. F. Shollenberger had seen a case in which on the eighth day the heart's action became very slow, being not over 15 to 20 beats per minute for the last three days, and on the last day down to 11 beats per minute.

Dr. G. N. Macomber asked if it were possible that antitoxin might have any such effect.

Dr. A. G. Case thought not. He had seen this symptom before the use of antitoxin. After the seventh or eighth day when the throat was improving, the pulse became very slow and so soft it could hardly be felt.

Dr. C. E. Locke had seen a case like Dr. Hall's. At the autopsy extreme dilatation of the heart was found.

Dr. G. A. Moleen had seen a girl of 8 years in which the symptoms were bronchial. But a small patch of membrane was found and showed diphtheria bacilli. Antitoxin was given. She improved but subsequently meningitis developed, ending in death.

Dr. Grant had seen a case of nasal diphtheria in which enormous doses of antitoxin were given. Later the patient developed a high temperature and intermittent heart. But the symptoms were not dangerous and disappeared under stimulation.

Dr. C. F. Shollenberger had seen an adult given 3000 units who, after 24 hours of improvement suddenly developed acute dementia, attempting suicide. After 77 hours this suddenly cleared up and recovery followed.

Dr. F. W. Kenney had seen a few cases of slow heart in diphtheria. All of them seemed to be overwhelmed by the toxin from the first. He had seen in a girl of 9 the symptoms of cerebro-spinal meningitis. A point of exudate was found in the throat. Antitoxin was given and she promptly improved.

Dr. W. J. Rothwell said that before antitoxin was brought into use we encountered all these symptoms that appear now and many more. He had never seen any bad effects from antitoxin used early. But it was useless to push large doses after the fourth day. By that time the toxin had done its work. He had seen no case of death from diphtheria where antitoxin had been used early. He had had several cases die with this slow pulse. Heart stimulants seemed to do no good. He thought degeneration of the cardiac ganglia might cause it.

Dr. Hall wished to make a sharp distinction

between the slow pulse occurring as in this case, and that which occurs during convalescence in diphtheria, as after other acute diseases. He believed that antitoxin caused none of these symptoms.

The Committee on Telephone Rates and Accommodations made its report, pointing out that in Denver the rates were excessively high, and the service unnecessarily slow and inefficient.

El Paso County—The regular monthly meeting of the El Paso County Medical Society was held at the Antlers on Wednesday evening, April 12th. There was a large and enthusiastic attendance of members and the following visitors: Dr. George A. Boyd and Dr. J. H. Kellogg of Battle Creek, Mich.

Dr. Robert K. Hutchings reported a case of **stone in the kidney** with a nephrolithotomy resulting most favorably, also a case of **gall stones** treated by operation with complete cure.

Dr. John F. McConnell read a very excellent paper on the Fever of Phthisis, its Etiology, Sequelae and Treatment. This paper will appear in full in an early number of Colorado Medicine.

Discussion on Dr. Hutchings' cases and Dr. McConnell's paper was general and led by Drs. C. R. Arnold, H. W. Hoagland, J. H. Kellogg, S. E. Solly, Will H. Swan and Gerald B. Webb.

M. P. REYNOLDS,
Secretary.

Fremont—The Fremont County Medical Society met in Florence, May 1st. The members of the Society were delightfully entertained at dinner by Dr. and Mrs. Rambo, after which the Society adjourned to the office of Dr. Adkinson where the regular session was held. Members present: Drs. Rambo, Adkinson, Cummings, Edwards and F. R. Moore of Florence, Drs. Little, T. B. Moore, Graves, Wade, Holmes, Phelps of Canon City, Williamson of Rockvale. Visitors, Dr. Henshaw, Dr. Chandler and Dr. Corwin of Pueblo.

Dr. T. B. Moore reported a case of **gangrenous appendix**, with specimen, operated on by himself and Dr. Graves. Dr. Little reported a case of pneumonia.

Dr. Williamson read an able paper on **Temperature Before and After Confinement**. This was discussed by the members present, Dr. Corwin giving an interesting talk on The Causes of Temperature Before and After Delivery.

Dr. Graves read the closing remarks of an

address of Dr. Osler read before one of the medical societies.

The Medical Bill as it now stands was also read and discussed.

Dr. Holmes presented an interesting specimen of cancer of the stomach, with report of case. After a pleasant and profitable meeting the Society adjourned to meet in Canon City.

M. E. PHELPS,
Secretary.

The Larimer County Medical Society met in the City Hall, April 5th. Present: Drs. Kerlin, Gilbert, Upson and Stuver. Dr. Upson read an interesting paper on the **Hydriatic Treatment of Typhoid Fever**. He first gave an historical resume of the subject and then called attention to the advantages, complications and dangers that may attend this method of treatment. The paper was discussed by Drs. Kerlin, Gilbert and Stuver.

Dr. Stuver called attention to the advantages of the **Intra-Rectal Injection of Normal Salt Solution** in promoting the elimination of toxins, sustaining the action of the heart, strengthening the nervous system, reducing the danger of delirium, tympanites, and intestinal hemorrhage and tending toward more prompt and complete recovery. He has treated seventy cases by this method, with one death.

E. STUVER,
Secretary.

Las Animas County—The Las Animas County Medical Society met April 7th, at the office of Dr. Wm. Hutchinson, with almost the entire membership present. A number of clinical cases with **varicose veins** were presented that had been recently operated upon, and the result seemed to be all that could be desired.

Dr. Hutchinson then presented a paper on **Uterine Displacements** which was freely discussed. The name of Dr. C. N. McGuire of Walsenburg was presented for membership, and under suspension of the rules he was unanimously elected.

J. G. ESPEY,
Secretary.

Otero County—At the meeting of the Otero County Medical Society April 18, Dr. A. L. Stubbs read a paper on **Hip Joint Disease**.

A committee consisting of Edwards, Stubbs and Kearns was appointed to revise the fee bill for the City of La Junta.

For the first time in many months, no out of town members were present.

At the June meeting Drs. Corwin and Marbourg will be present and a banquet will be held.

E. GARD EDWARDS,
Secretary.

Pueblo—The regular meeting of the Pueblo County Medical Society was held April 4th in the McClelland Library. A paper was read by Dr. F. G. Mohlan upon **Surgical Sequelae of Typhoid Fever**. The writer took up the viscera in order, and mentioned the various sequelae of typhoid that may demand surgical interference. Special stress was laid upon the pathological conditions of liver and gall bladder; typhoid appendicitis; diseases of bones and joints, and parotitis.

M. J. KEENEY,
Secretary.

The Teller County Medical Society met in regular session in the parlor of the National Hotel in Cripple Creek on Tuesday, February 28, 1905, the President, Dr. Pennock, presiding.

Drs. J. N. Hall and Leonard Freeman of Denver were guests of the Society, and the following members were present: Drs. Manley, Polly, McIntyre, Vinyard, Morris, Hayes, Gaston, Cunningham, Magruder, King, Hereford, Van Der Schouw, Kitchen, Katherine Polly, Latimer, St. Clair, Thomas, Hassenplug, Pennock, Campbell, McKenzie, Driscoll, Hall, Freeman, A. I. Hayes and Halley.

After dispensing with the routine business the Society was favored with very interesting and instructive talks by our guests.

Dr. Freeman protested so strongly against being compelled to remain and listen to Dr. Hall that he was permitted to speak first, while Dr. Hall maintained painful though respectful silence. Dr. Freeman unavoidably heard the first few words of Dr. Hall's remarks and was so paralyzed by his eloquence that he could not throw off the spell and was compelled to listen. Dr. Freeman spoke on **Tuberculosis of the Genito-Urinary Tract**. Dr. Hall's subject was **Abdominal Pain and Its Significance**.

If there are any physicians outside of Teller county who have heard of these two men, they know that no subject upon which they might speak could fail to create a great deal of interest among physicians; and in this case both addresses were very practical and especially adapted for such a company of general practitioners as was present.

The Society then adjourned to the banquet room, where our regular round table discussions took place. Dr. Freeman here, by request, described his visit to the **Lepre Colonies in the Molaki Islands**,

and made us all happy that we were not forced residents of that place.

Dr. Freeman's Christian disposition was frequently severely taxed in trying to restrain Dr. Hall, whom, he informed us, had never visited a large city before.

Dr. Hall responded to a toast upon the effect of our altitude and hills upon horses and other animals; and told of some wonderful experiences while here, which if repeated to his Denver friends, will dumfound the wise.

Dr. Magruder was asked to give a short talk upon **The Business Side of a Doctor's Life**, and responded as follows:

It is estimated that about 90% of those taking up the practice of medicine do so because they believe it is an easy way to make money. It is also estimated that over 50% of these quit the profession at the end of the first or second year's work because they find it more remunerative to be a street-car conductor. This is borne out in St. Louis, where a large number of the employes of the street-car company in that city could write M. D. after their names (meaning more than mule drivers) if they were not ashamed to do so.

That doctors are poor business men is so patent, and has been for so long, that I am surprised that it was not so stated in the Book of Proverbs.

Why are they? Let us see.

First. Vanity. When we first began the practice and had only one patient we hated to dun him. We hated to admit that we needed that particular money from that lone particular patient to get the next meal. We wanted to appear prosperous and not in need. So we said, "That's all right. Hand it to me some other time."

And thereby we fell!

Second. Habit. This pretty talk about "Hand it to me some other time," produced a habit of treating other patients the same way and this habit, begotten by Vanity, has made our early training, which has stuck closer to us than the proverbial sick kitten.

Third. Many people tell us that they must work eight hours to receive what we charge for a half hour's work, so that we begin to cut prices to meet a \$3.00 and eight-hour day.

Fourth. Other physicians are frequently responsible for our unpaid bills. I have time and time again tried to get this Society to enforce cash payments for all anesthetics. Since taking up this phase of the work I have asked but two physicians to give an anesthetic for me where I had not previously provided for their payment at completion of work. We should all stand together for this. If the people are told that the anesthetic must be cash, they will provide for it.

We decided here some time ago to charge \$5.00 for old-line life insurance examinations. Many of the companies are now offering only \$2.00 and \$3.00 and many of the doctors here are making examinations for the company's price.

The medical profession is placed in a position so unique that it is a great handicap to its members. We can't (?) advertise, can't send the delivery wagon around for orders, can't give trading stamps—can't do anything known to modern business methods to quicken the pace on the road to wealth.

Just think what bargain days we could have if we could give double trading stamps every Monday and Saturday or put out a sign saying "office examinations today \$4.99, marked down from \$5.00."

To be serious, gentlemen, what are we going to do? I have five things to offer by way of solution:

First. Charge firmly in proportion to services rendered. 2. Inforce firmly those charges. 3. Dunn firmly a poor pay patient as if you had to have a dollar to buy groceries. 4. Refuse firmly to attend those who can, but won't pay. 5. Love firmly one another.

Dr. Latimer compared **The Country Doctor and the City Doctor**:

"I find no especial difference between the country doctor and the city doctor. A good doctor is a good doctor anywhere you find him, and a poor doctor is a poor doctor regardless of where he may be found.

Some of the best and most successful physicians I have ever known have been country practitioners and some of the most utter failures I have found in the city.

Naturally, the competition being keener and greater in the city, stimulates greater study and the contact of the weaker with the strong should, and I believe does, make even the average man of the city perhaps a better qualified man than the average country doctor."

Dr. Gaston presented **The Poetry of Medical Practice**.

I am sorrry for any man who isn't proud of his work. Nothing counts except the spirit in which you do a thing. Mrs. Eddy had a student to whom she said: "There is no matter. All is mind." "Yes," said he, "I understand I have a million dollars in the bank, in my mind. Would you cash a check for me for a hundred thousand or so?" "Yes," said she, "in my mind." "No matter," said he; "never mind."

Every poet has found some time to devote to the medical profession.

Dr. Gaston then read selections from Oliver Wendell Holmes, Ben King and others.

Weld—The regular meeting of the Weld County Medical Society was held in Dr. Law's office, Monday evening, April 24th. The meeting was called to order with a good attendance of members.

Dr. Reed reported a surgical thumb in which he was very much interested, it being on his own person. Referred to Drs. Law and Church as an examining committee.

Dr. Call's notice of motion to change the date of meeting was read, but presenting no signs of animation, was laid on the table.

Mr. B. D. Sanborn was present by invitation, and laid before the meeting his views regarding a safe and bountiful **water supply** for the city, obtainable by a system of exchange from the Thompson. Referred to Drs. Pogue, Law and Church as an investigating committee to report at the next meeting.

Moved by Dr. Church and seconded by Dr. Law, that the city authorities be requested to appoint a regular and reputable practicing physician as health officer of the city, according to state statutes covering the subject. Carried unanimously. The first Monday in June was named for the date of the annual business meeting to discuss economic matters and general welfare of the physician body.

The regular program was opened by Dr. Spaulding, who read a paper on the **Etiology of Pulmonary Tuberculosis**, discussing (1) Hereditary Influences; (2) Predisposition; (3) Modes of Infection. The paper covered the ground fully and was well received.

Dr. Church read a paper on the **histologic pathology** of the same disease, describing tubercle formation and sclerosis.

Dr. Hughes next read a paper on the **Clinical Forms of Pulmonary Tuberculosis**. He said they varied according to physiological resistance, virulence of infection, complicating organisms, age of infected individual, and finally mentioned possibility of an acquired immunity, which Cornet refers to in his classical work.

Dr. Pogue took up the **physical examination of the chest**, laying stress on absence of any covering on chest wall. He exemplified his method on a case of pulmonary tuberculosis from the County Hospital which exhibited a variety of lesions.

Dr. Law, whose experience, both personal and in the army, gave him voice of authority, differentiated **chronic malaria and pulmonary tuberculosis**. If the eastern physicians would rely on quinine as an able discriminator, we

would receive fewer patients suffering with malaria.

Dr. Ringle closed the series with a short article on **Laryngeal Conditions and Complications**. He failed—contrary to his custom—to discuss his favorite treatment, which has rendered him signal service.

Discussion was general and hinged on the pathological outlook. Dr. Pogue quoted Dr. Mayo's recent article, referring to the fact that the tubercle bacillus was a pure parasite, dying with its host; and that death of host was usually if not always due to complicating organisms. Dr. Hughes took issue with both Drs. Mayo and Pogue, mentioning miliary tuberculosis and peritoneal forms as substantiating his claim. Dr. Hughes also congratulated the county patient present on the benefit he received from liquozone.

Dr. Church, in explaining the fate of the contents of the tubercle said that they did not undergo fatty degeneration, the caseation was due to gradual restriction of circulation of the fibrous elements surrounding it, contracting.

Dr. Ringle mentioned the frequent disconsolate frame of mind of many phthysical patients. Dr. Law did not so agree; thought there was a "spes phthistica," the young man recently present being a good example.

The meeting now adjourned until the last meeting in May, when Diphtheria will be the subject.

C. B. DYDE,
Secretary.

DENVER CLINICAL AND PATHOLOGICAL SOCIETY.

The regular monthly meeting of the Denver Clinical and Pathological Society was held April 14, 1905, in the Academy of Medicine Hall.

Sarcoma of the Nose.—Dr. Levy exhibited a patient; female 75 years of age, presenting a history of growth in the right nasal cavity beginning in January, 1903. In August of the same year the obstruction had become complete, and on December 27th and 29th, large masses of the growth were removed and submitted to Dr. Mitchell, of Denver, and to Prof. Welch, of Johns Hopkins, for examination, both of whom pronounced it to be the round-celled variety of sarcoma. From June 11th to August 4th, 1903, previous to operation, Coley's serum had been used with no result, and the use of the X-ray was begun at the same time and continued for one year, i. e., from June, 1903 to June, 1904, also with negative result. There

was no recurrence of the growth on the right side, but the left side soon became involved, and to such an extent that the case seemed hopeless from a surgical standpoint. In addition growths to the number of six, presenting clinically the appearance of sarcoma, but which were not submitted to the microscope, appeared on the legs, the latter not being submitted to the influence of the X-ray. Shortly after all treatment had been discontinued, the nasal condition began to improve, the obstruction entirely disappearing, and four of the six growths on the legs also clearing up; the remaining two, however, still continue to grow to some extent. At the present time the general health seems good. A general discussion of this very interesting case followed.

Dr. Hall exhibited a male with **diastolic pulmonary regurgitation**, and requested the appointment of a committee to examine the case. The president requested Drs. Edson, Bergtold and Van Zant to act in that capacity. The committee reported that in their opinion there was present a well-marked mitral stenosis, presenting at times a diastolic murmur over the pulmonic orifice, supposed to be a relative pulmonic regurgitation.

Dr. Stover exhibited (1) a **skiagraph** of the radius after the reception of a blow on the wrist. (2) A skiagraph of a case of **osteomyelitis** of the tibia showing sequestra.

Dr. Hill exhibited a **specimen of urine** from a woman in coma, who had lost weight previously, and supposed to be suffering from extra uterine pregnancy. No sugar was found, but acetone and diacetic acid were present and pus was being discharged per vaginam.

Dr. Kleiner reported a case of **whooping cough** in which the paroxysms were preceded by convulsive seizures; later followed the cough. Discussed by Dr. Hall.

Dr. Beggs reported a case of **glycosuria**, the urine showing $4\frac{1}{2}$ per cent. of sugar, the patient showing a loss in weight of 70 pounds. Tuberculosis of both apices, with bacilli in the sputa were found.

Dr. Pershing reported a case of **edema of the right arm** in a woman. No cause could be found and a diagnosis of "blue edema of hysteria" was made. Discussed by Dr. Bonney.

Dr. Levy discussed the treatment of **hysterical aphasia** by mental suggestion, but believed a positive diagnosis must first be made. Further discussed by Dr. Bonney, who reported two cases, and by Drs. Pershing, Sewall and Rogers.

Dr. Bonney reported a case of **pulmonary tuberculosis** with recovery, followed by **mania**, the delusions disappearing only after the patient's return to her home in the South.

Dr. Sewall reported the case of a boy with a tuberculous family history, taken with a sudden pain in the right groin and hip in the night. Examination disclosed localized tenderness at these points, the right leg flexed and abducted, pulse not rapid, temperature 100 degrees. The next day pain appeared in the left knee, and under anti-rheumatic treatment the condition cleared up. Discussed by Dr. Bonney.

Dr. Freeman discussed the recent article by Murphy in which he speaks of a normal **temperature in cases of appendicitis** in which pus is present; while in many cases presenting the typical symptoms with elevation of temperature, pulse, etc., no appendicitis is found. From experience Dr. Freeman had found that the passage of renal calculi is a condition in which one may get all the symptoms of appendicitis. Discussed by Dr. Pershing.

Dr. Blaine reported a case of **syphilis** in which there was no history of primary or secondary lesions, the case being in the tertiary stage. The children had never presented any signs of syphilis. Discussed by Dr. Sewall who also reported a case of intractable neuralgia, requiring large doses of morphia, fully relieved by treatment with iodide of potassium, and by Dr. Freeman who had operated on Dr. Sewall's case, and removed necrotic bone from the nasal passage.

Dr. Hall further reported on the case of **tape-worm** exhibited at a previous meeting, stating that it was the *Bothiocephalus latus*, quite rare in this country, but found in districts bordering on the Baltic sea and in parts of Switzerland. Its head possesses two lateral grooves and has no hooklets, differing from the *tenia* in these respects.

F. W. KENNEY, Secretary.

COLORADO OPHTHALMOLOGICAL SOCIETY.

The Colorado Ophthalmological Society met April 29, 1905, in the office of Dr. W. L. Hess, Denver.

Dr. Coover reported a case of **corneal opacity** involving all of the cornea, except a small area over the pupil, where it had been scraped off. The opinions of the oculists present were divided between a diagnosis of vernal conjunctivitis and corneal sclerosis.

Dr. Jackson reported a case of a coal miner with opaque cornea coming on in three or four days after injury by coal or rock to a previously healthy eye. There were shell-like layers of opacity in the cornea, with spots of the same opacity in the conjunctiva; the latter decreasing in size, but the former remaining unchanged after four months. Scraping resulted in no return of the opaque film, which consisted of lime salts.

Dr. Neepier reported profuse whitish discharge from nostrils in two cases of *ophthalmia neonatorum*, in which 50 per cent. *argyrol* solution was used in the eyes. One case also showed dark specks in the vomit, the other in the stools; due in each case to precipitated silver. Other cases were reported.

This being the annual meeting the reports of the secretary and treasurer were read, which showed a high percentage of attendance of the members and an increase in the membership, and of cash on hand. The election of officers resulted as follows: Secretary, Dr. George F. Libby; treasurer, Dr. Melville Black; executive committee, Drs. E. M. Marbourg, Libby and Black. There were nine members and three visitors present.

G. F. LIBBY,

BOOKS.

The Modern Mastoid Operation.—Frederick Whiting, A. M., M. D., New York. It has been a pleasure to read this book. Every line was read carefully for fear something good would be overlooked, which can not be said of many books. It is most intensely interesting because there is so much in it that is new, and every step of the operation is made so plain, and beautifully illustrated. In short, the book is a masterpiece, and stands today without a peer.

The author has had rare opportunities and has used them well. He has performed a great many operations, about eight hundred, upon the live subject and upon the cadaver. Besides this he has taught for years the anatomy and surgery of the mastoid. This teaching has been to private classes where each student was shown numerous pickled and dry sections of the temporal bone, as well as required to operate upon the cadaver. This work has made Whiting familiar with every type of mastoid bone and has enabled him to become so intimately acquainted with its anatomy that he speaks with the authority of a master.

The completed mastoid operation of Whiting is an outgrowth of the Schwartz operation.

The author's vast experience with the Schwartz operation caused him from time to time to make certain modifications, the final result of which is his present method of operating, and which he called the complete mastoid operation. Every part of the operation bears out its name. The incisions in the soft parts, and the turning of the flaps make it possible to so expose the mastoid region that its whole exterior conformation is in view. Whiting believes this is very important, because its shape and size have important bearings upon the situation of the sigmoid sinus that lies underneath. After reading this book, one feels that accidental injury of the sinus would constitute gross carelessness. Whiting believes the reason why the Schwartz operation sometimes failed was because the mastoid tip was not invariably removed, or because certain cells at the root of the zygoma were not removed. Whiting contends that every mastoid cell should be removed, and that to leave any behind exposes the patient to another possible operation. The more thorough the operation the shorter the after treatment. I quite concur in this, and in consequence am glad to know about the cells at the root of the zygoma. Whiting claims that these cells are almost invariably present, and that it is the exception rather than the rule that they are found by most operators. They are situated anterior to and external to the antrum, and because of being so close to the antrum are almost always involved in the inflammatory process. While it has been my practice for years to remove the tip of the mastoid, I have not recognized the presence of the zygomatic cells, and if I have opened into them it has not been intentional. It is worth a good deal to know about these cells as well as how to attack them.

The dressing of the wound is dealt with at considerable length. Whiting's method is peculiarly his own, which consists, after partial suturing of the wound angles, in the introduction of a thin perforated sheet of rubber into the wound and in this the regular gauze strips are packed until the wound is filled. The rubber serves to keep the gauze away from the tissues and bone, and makes it possible to remove the gauze from the rubber without any sticking and pain at the first dressing. After this the rubber is no longer used since the usual gauze packing can be carried out without its adhering to the part after this dressing.

The author does not deal with the radical operation for the cure of chronic otorrhoea,

nor does he deal with the surgical management of thrombosis of the sinus. He must have some very definite and valuable ideas of his own to give us upon these conditions, and we trust it will not be long before he will publish another volume devoted to the radical mastoid operation and to the complications from mastoid disease.

MELVILLE BLACK.

The Ophthalmic Year-Book for 1904. By Edward Jackson, M. D. Pages 260, 45 Illustrations. One Colored Plate. Herrick Book and Stationery Co., Denver. 1904.

This oook, written for the specialist, will have but little interest for the majority of readers of COLORADO MEDICINE, except as an example of what can be done in this line in Colorado. The enormous amount of our current medical literature is suggested by the statement that the portion bearing on ophthalmology amounts to twenty or thirty thousand pages, one-third of which purports to be original matter. It is this great unmanageable mass that renders necessary year-books, review departments, index catalogues, and literature of this class. Such literature cannot replace the reading of the best original articles. But something of the kind is absolutely essential to enable anyone to keep abreast of the general progress of the profession, as a guide to what will be of most value to read in the original, and to enable one to refer back to what he has previously read, and so make it available when it is most needed.

This Year-Book consists of a critical digest of what its author judges to be the most important literature of the year from the standpoint of the ophthalmic surgeon. To this is added a list of books and monographs, and of the most important journal articles of the year. These lists are arranged alphabetically by the authors' names, the digest being arranged so as to bring together related subjects. An index of some fifteen pages furnishes the means of quickly getting at whatever the volume contains upon a particular subject.

Progressive Medicine. Vol. 1. March, 1905. Edited by Hobart Amory Hare, M. D. Octavo 298 pages. Ten engravings and full-page plate. Cloth bound, per annum, \$9.00; paper, \$6.00. Lea Brothers & Co., Philadelphia and New York.

The first volume of the new year opens with Frazier's thoroughly interesting article on the Surgery of the Head, Neck and Thorax. His diagram showing where incisions should be made to avoid important branches of the facial nerves will be found very convenient and serviceable. The sections on the use of paraffin to correct the deformity produced by facial atrophy, and upon arteria of the nasal passages, are also well illustrated. In Preble's chapter on Infectious Diseases, diphtheria, dysentery, epidemic meningitis, pneumonia, rheumatism and typhoid fever, come in for extended consideration. Crandall, writing on Diseases of Children, devotes most space to rachitis, marasmus and infant feeding. The reviews by Grayson on Laryngology and Rhinology, and by Randolph on Otology, are up to their usual high standard.

A Text Book of Alkaloidal Therapeutics. By W. F. Waugh and W. C. Abbott, with the collaboration of E. M. Epstein. Octavo, 432 pages. Chicago, 1904.

Therapeutic Guide to Alkaloidal-Dosimetric Medication. By John M. Shaller, M. D. Second edition. 12 mo. 420 pages. Chicago, 1904.

These books, published by the Clinic Publishing Company, belong to a group of publications that tend to increase the demand for "alkaloidal" preparations; and they also tend to raise up something of a therapeutic school or cult. But they contain a large amount of definite information, which will strongly appeal to the practical physician. The articles dealing with the different drugs are arranged alphabetically in each book, while the index furnishes references to the different diseases for which these drugs are used.

The preface to this second edition of Dr. Shaller's book is dated from Denver, Colorado.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month.....O. M. Gilbert, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Bilsborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, September and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, September and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month.....
Teller County, fourth Tuesday in each month.....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

American Medical Association

Next meeting at Portland, Oregon, July 11-14, 1905.

President:

John H. Musser, Philadelphia, Pa.

President-Elect:

Lewis H. McMurtry, Louisville, Ky.

General Secretary and Editor:

Geo. H. Simmons, 103 Dearborn Ave., Chicago, Ill.

Chairman of Committee of Arrangements:

K. A. J. McKenzie, Portland, Ore.

State Medical Societies

Place and Date of Meeting with Name and Address of Secretary.

Arizona Medical Association, Prescott, June 1-2, 1905..J. W. Foss, Phoenix
California, Medical Society of State of, Riverside, April 18-20, 1905
.....P. M. Jones, San Francisco, Y. M. C. A. Bldg.
Idaho State Medical Society, Boise, Oct. 5-6.....E. E. Maxey, Boise
Indian Territory Medical Association, Tulsa, June 20-22.....
.....R. J. Crabill, McAlester
Kansas Medical Society, Wichita, May, 1905....C. S. Huffman, Columbus
Montana State Medical Association, Butte, May 17-18.....
.....G. W. Cahoon, Butte
Nebraska State Medical Association, Beatrice, May 2, 3, 4.....
.....A. D. Wilkinson, Lincoln
Nevada Medical Association, Reno, May 9-10.....J. L. Robinson, Reno
New Mexico Medical Society, Las Vegas, May 10.....
.....G. H. Fitzgerald, Albuquerque
Oklahoma State Medical Association, Guthrie, July 10, 11.....
.....E. O. Barker, Guthrie
Oregon State Medical Association.....L. H. Hamilton, Portland
Texas State Medical Association, Houston, April 25-28, 1905.....
.....I. C. Chase, Fort Worth
Utah State Medical Association, Salt Lake City, May 9-10.....
.....W. S. Ellerbeck, Salt Lake City
Washington State Medical Association, Tacoma, Sept..A. H. Coe, Spokane
Wyoming State Medical Society, Cheyenne, Sept. 27-28.....
.....G. L. Strader, Cheyenne

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Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

OFFICERS.

President:

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Vice-Presidents:

1st, F. H. McNaught, Denver; 2nd, L. M. Giffin, Boulder; 3rd, B. F. Cunningham, Cripple Creek.

Secretary:

J. M. Blaine, Steele Block, Denver.

Treasurer:

W. J. Rothwell, Cooper Block, Denver.

Board of Councillors:

Term Expires:

1905—H. R. Bull, Grand Junction; S. Kahn, Leadville.

1906—P. J. McHugh, Fort Collins; E. J. A. Rogers, Denver.

1907—J. N. Hall, Denver; Hubert Work, Pueblo.

1908—C. F. Gardiner, Colorado Springs; S. D. Hopkins, Denver.

1909—J. T. Melvin, Saguache; W. W. Reed, Boulder.

Delegates to American Medical Association:

Term Expires: Delegates:

1905—W. A. Jayne, Denver.

1906—P. F. Gildea, Colorado Springs.

Alternates:

C. K. Fleming, Denver.

H. A. Black, Pueblo.

COMMITTEES.

Publication Committee:

Term Expires:

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1906—S. E. Solly, Colorado Springs.

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LEADING ARTICLES

SUCCESSFUL AND ATTEMPTED LEGISLATION REGARDING BOARDS OF HEALTH.

The necessity for more extensive legal powers prompted the State Board of Health to appoint a committee on legislation during the latter months of 1904, with a view of reconstructing the Public Health Laws. House Bill No. 110, which was passed, and Senate Bill No. 128 as well as House Bill No. 111 which did not pass, were the result of the efforts of this committee.

House Bill No. 110, introduced by Mr. F. W. Frewen, consisted of a few amendments to what is known as the Local Board of Health Law. As is generally known two laws appear on our statute books, one the Local Board of Health Law, and the other the State Board of Health Law. The Local Law as it is to-day including its amendments is not by any means weak. It is couched in language of a broad and general character, the powers conferred are sweeping and permit great freedom of application by the Local Board of Health. For instance, Sec. 4, "The Board of Health shall make such regulations respecting nuisances, sources of filth and causes of sickness within its respective limits, and on board of any car or train of cars, as it shall judge necessary for the public health and safety and if any person shall violate any such regulation he shall, upon conviction, be fined in sum not exceeding one hundred dollars," permits the draft of regulations respecting nuisances, sources of filth and causes of sickness. This is not modified except in the manner of enforcement and procedure. Again, by Sec.

6, "The Board of Health shall examine into all nuisances, sources of filth and causes of sickness, that may in its opinion be injurious to the health of the inhabitants within its town, city or county, or in any car or train of cars within said town, city or county, and the same shall destroy, remove or prevent as the case may require;" it becomes mandatory upon every Local Board of Health to examine into nuisances, sources of filth and causes of sickness, and it further compels them to adopt remedies to offset or overcome such dangers.

In the opinion of the committee this law required but little revision and such was gained through H. B. 110. This bill provides especially the amending of the former method of reporting births, and as the law now stands, it requires the report of births within one week from the date of birth. This is of immense advantage in the collection of records from which to compile reliable statistics.

An entirely new section was also added which requires druggists to report within twelve hours, to the Local Board, the sale of all antitoxin, the amount and to whom sold, date of sale and whether or not ordered by a physician. Experience has shown that it is not an uncommon occurrence for antitoxin to be used in cases of diphtheria which are never reported. These cases recover, return to school and subsequent cases occur among the pupils. It offers a very good explanation of the inability of health authorities to trace the source of infection in local epidemics among pupils of one or more schools, though not among the child population of the whole community. I trust that this section will be enforced, for through its operations I am convinced that many cases will be discovered that otherwise would re-

main unknown. The penalty for not complying with both of the above amendments, upon conviction, is a fine of not less than five nor more than twenty dollars for each offense.

The law previous to its amendment required the Local Board to report to the State Board, before December 31st of each year, the marriages, births and deaths together with other information of public health interest occurring in its jurisdiction. This was inoperable, because an annual report, and in view of the more or less political organization of Local Boards—namely the County Commissioners and Town Councils sitting as boards of health for their respective jurisdictions—was neglected and forgotten among the other supposedly more important duties of these two bodies.

System and its constant practical application, are most necessary for the perfect operation of collecting health statistics. It was therefore thought wise to amend by requiring a monthly report on or before the fifth day of each month.

The committee thus disposed of the Local Board of Health Law.

The State Board of Health Law was, however, a very different matter. It required much time, thought and a careful analysis of the law as it stood and as desired. This law was amended with the idea of substituting a direct control of public health matters, in place of the very indirect one that at present exists; for the reason that the State in view of its larger experience is better able to advise and act in cases where the public safety is in danger, than is a local board of health.

The amendment provided for the report of every contagious or dangerous disease from the local board as well as from the householder, owner or occupant of premises on which such disease existed. It also gave the State the power of regulating quarantine and maintaining inspectors anywhere in the State for any purpose pertaining to the public health, and clothed them with the power of compelling a city,

county, corporation or individual to remedy any danger to the public health. It required the Board to use every effort to prevent the spread of dangerous diseases among the pupils of the public schools; and provided for the superseding of the school board, as far as public health was concerned, when such board was incompetent or unwilling to observe the necessary precautions in preserving health among their pupils. The expense of the superseding was borne by the school district involved. This particular portion was a feature of the law, for only too often do we find the health of our child population endangered by school boards either too ignorant to appreciate, or too unwilling to prevent danger.

The department of vital statistics also received its proper support by a clause distinctly authorizing a study and progression of this work. For the past two years licenses have been granted undertakers. This was done through a mutual agreement between the Board and the undertakers, in which the undertaker appeared for an examination, and if successful, was issued a license. He had to agree each year to follow the rules and regulations of the Board relative to the transportation, preparation and interment of dead bodies. These rules could only be enforced with those agreeing to comply with them. The amendment legalized these licenses and authorized the Board to issue others. A penalty in the nature of a fine was attached for violating the regulations and for engaging in the undertaking business without a license.

The cause of the bill's defeat was that portion pertaining to the transmission of disease either by means of, or incident to, certain occupations. It was made mandatory upon the Board to investigate the transmission of disease through certain occupations and if found that disease was transmitted, to compel those engaged to take precautions. The Board also had the privilege of holding examinations, issuing literature and conducting a school of in-

struction if necessary, for the education of those engaged. The finance for such extensive work was provided by means of a fee and license; that is, if an examination was held to determine anyone's fitness to follow an occupation coming under this law, a fee of not more than ten dollars could be charged, and to the successful a license could be issued. An annual renewal fee of two dollars was provided to enable the Board to publish matters of common interest to their licentiates. The object of the whole section was to regulate the trade of barbering. Unquestionably many skin troubles are spread by barbers, who for the sake of a few cents, will attend any individual regardless of the condition of the face or scalp. It was the intention if this bill became a law to hold schools of instruction and demonstration in all centers of the State for the education of barbers in the principles of asepsis. It was also intended to prepare literature for their study, to hold examinations and to issue licenses as a guarantee of any barber's efficiency to conduct a clean, safe establishment; to maintain a corps of inspectors to see that the rules of the Board were applied, and in a word to make it possible for any individual to secure clean tonsorial work. A penalty was also attached for violation.

However, the majority could not appreciate anything save raising \$10.00 from each barber; and the usual condemnation of graft was applied. There were many and bitter attacks upon the integrity of the members of the Board of Health. It was inferred, as no salary nor perquisite attached to a membership, that it was the intention of the Board to pay an enormous dividend to itself after the passage of the bill. There seemed to be an atmosphere of total inability to believe that moneys raised under this law would be used for the purpose defined. An attempt was made by amending the bill to provide for the safe keeping of such funds by placing them under the control of the State Treasurer, but even so the bill was killed in the House. It was revived in the Sen-

ate with the objectionable portions removed in order to make another attempt to pass it, and save, if possible, some of its other good features.

The establishment of a laboratory was included, in which both chemical and bacteriological work of all kinds, pertaining to the public health, could be done. This was to be financed by a special appropriation included under the bill appropriating salaries, etc. In the course of a few years the purity of the water from all of the water sheds would be known and municipalities could be safely advised of the source from which to secure their water supply and the steps necessary to purify it. Physicians could be assisted in their diagnosis of doubtful cases and through such service the health authorities could be informed of the existence of some contagious diseases while in their endemic form.

The greatest question of public health interests to-day, is that of water. We, unlike many other States, are confronted with a minimum amount of water and this supply purely surface. In consequence it is difficult to secure water, and more difficult to keep it purified. It therefore was thought wise to ask for enough power to maintain as pure a supply as possible. Had the bill passed the Board could have condemned impure water as unfit for human consumption and prohibited its use and could have insisted upon municipalities, corporations or individuals serving a wholesome water. All new water systems or additions could have been approved, cyanide mills, stockyards, stamp mills and other commercial pursuits could be stopped from emptying their refuse in the streams, and in addition control of the disposal of sewage was granted, because of all sources of contamination this is the worst. The Board was also given the power to define what constituted a contamination and to set the standard of chemical and bacteriological purity necessary to secure approval. Strange to say this portion of the bill was but little criticised.

The epidemic of typhoid fever at Leadville demanded the expenditure of money and the Board was compelled to draw a portion of an emergency appropriation of \$5,000.00. To reinstate the withdrawal and to provide for funds to handle epidemics Sec. 10 was amended, so that any sum could be drawn by the Governor to be used for extraordinary emergencies only. Had this bill become a law, whenever an epidemic occurred that endangered the public safety the Board could be supplied with funds sufficient to control it. This provision alone was worthy of all the labor, time and lobbying spent upon the bill.

C. E. COOPER.

NOTE AND COMMENT.

Medical Advertising.—The American Medical Association meeting at Portland will have an important influence in settling some questions regarding medical advertising. The Council on Pharmacy and Chemistry announced in the Journal of the Association for March 4th, and the position taken by the Trustees of the Association with regard to the admission of drug advertising to its publications, are excellent steps in the right direction. But they will only be thoroughly effective for good if the Council and the Trustees are made conscious of the earnest and enthusiastic support of members of the Association at large. Those who have been disgusted with the use of medical journals to promote the introduction of secret nostrums to the medical profession, and through the profession to the laity, should be in attendance prepared to point out to others who may not have seen the importance of this step, the need there is to check the tendency to subordinate medical science to the interests of the manufacturers of copyrighted preparations.

Perhaps even more important will be the action taken in the meeting of those who have charge of the Journals published by the State Medical Societies. Even in

some of these journals advertisements of distinctly objectionable character have been admitted. There is a disposition, however, to conform to some general standard that will be accepted by all; and it is very important that in fixing such standard the best ideals of the profession should be given their proper influence.

The actual voting upon motions concerned with these matters will be done by a few. But their action will depend very largely upon what is thought and said by those around them. An author ought to be able to publish a scientific paper without being ashamed of advertisements that face it from the opposite page. A physician ought to be able to denounce the quack advertisement in the daily papers without having to explain or apologize for exactly similar claims made in the advertising pages of his favorite medical journal.

But the purging of these advertising pages cannot be left wholly to those who publish the journals even when they have been chosen for that duty by the medical profession.

How to Get to the Portland Meeting.—The Journal of the American Medical Association for June 3rd contains a great deal of interesting and important information regarding the Portland meeting; and the excursions arranged to it from Chicago and other points in the East. From Denver we can go over the Burlington route to Billings, Montana, and thence over the Northern Pacific by Livingston (where a branch runs to Yellowstone Park), through Spokane and Tacoma to Portland. By this route the time is over three days; leaving Denver soon after midnight and arriving at Portland early in the morning. Another route is by the Union Pacific, through Cheyenne, Granger, Pocatello (from whence the Yellowstone may be reached by branch line and stage) and down the Columbia River. This requires two days. Leaving Denver at six in the evening, Portland is reached at 5:25 p. m. of the second day, giving daylight for the fine scenery of the Columbia River.

A third route is by the Denver and Rio Grande, or the Colorado Midland to Salt Lake, Ogden, Pocatello and thence over the Oregon Short Line as in the route last mentioned. To go this way and see the best scenery, one should leave Denver in the morning, arriving at Portland the evening of the second day. It is also possible to go by any of the lines to California; and thence to Portland, either by the Shasta route or by sea. It has also been arranged so that one can go by one route and return by either of the others.

The time limit on the tickets is ninety days; and by giving the proper notice one may stop over at any desired point. It will be necessary in purchasing tickets to indicate the route by which it is proposed to return. From Colorado points the rate for the round trip to Portland and return by Billings, Cheyenne or Ogden is \$40. The Pullman each way is \$9.50 per double berth. Going or returning by California the additional fare is \$11 making \$51 for the round trip; and there is an additional charge for Pullman berth, or for state room in going by sea. A small party will leave Denver, Saturday, July 8th, arriving at Portland Monday evening. One of the Eastern excursions is scheduled to pass through Colorado going to Portland, and another on the return trip.

ORIGINAL PAPERS

*WHAT IS DOING IN AMERICA IN THE FIGHT AGAINST CONSUMPTION.**

A. ZEDERBAUM, M.D., Denver.

Great truths require centuries of slow evolution before they become laws and are put into practice for the benefit of mankind. The question of tuberculosis, of its causes and practical consequences, is one of the many confirmations of this aphorism.

Not before two decades ago, when it had been firmly established that tuberculosis was neither an hereditary nor a strictly contagious disease, that it was preventable and in a considerable percentage of cases, curable, could the campaign against this devastating plague be inaugurated on such a large and practical scale as we see it now going on all over the civilized world.

The United States can not, unfortunately, boast of being the leader in that great and gratifying movement. Much, in fact a good deal, has surely been done in our country in the last ten to fifteen years, but the work has so far been limited to the larger centers, and has almost been untouched in hundreds of smaller places.

To successfully fight a disease so widely spread, and so scourging in its visible and invisible effects, is a task that requires the collaboration of each and every one of us. The crusade against consumption had, therefore, to begin with the problem of educating the people to the duties before them, and to the ways and means by which they could and must accomplish these duties, both for their own sake and for the salvation of their respective environments.

The educational propaganda undertaken for that purpose by societies, circles and individuals, has found expression in the publication and gratuitous distribution of pamphlets, leaflets and circulars in various languages, in the arranging of public lectures, and in verbal informations extended in the quarters of the poor by authoritative agents selected for this object. All these endeavors tend to promulgate the fact that tuberculous is caused by an infinitesimal fungous growth, a germ discovered by Koch; that this germ does not multiply outside of the body, that it can be killed by the simplest methods, and that disinfection and the stringent control of indiscriminate expectoration, are the most essential measures in the battle with consumption. Educational efforts are also

*Read before the Denver Academy of Medicine, Mar. 31, 1905.

aiming to acquaint the masses with the social side of tuberculosis, with its damaging effects on the unprotected healthy, and with the urgent need of amply providing for the victims of the disease in the interest of those that have by mere chance escaped its ravages.

Next to their activity in instruction, the anti-tuberculosis crusaders are devoting their energies to the prevention of the spreading of the disease, by practical measures. It is typical of Americans to cheerfully burden themselves with the work which their paid public officials fail to fulfill. Only few health boards and departments in our country, where the staffs are selected and appointed with no consideration as to political partisanship, have been able to show what official bodies can do under favorable circumstances.

As a model of a health department in that respect the New York Board of Health stands foremost in the ranks, and has won for itself a fame far beyond the boundaries of this country. It had to fight for every inch of ground that covers at present its vast and complex domain of activity.

The combating of tuberculosis being illusionary without keeping track of the individual cases, of the patients' homes, and of the districts in which the latter are located, a compulsory notification to the Board of Health by physicians of all the tubercular patients under their care was adopted, especially of those in tenement dwellings where proper accommodations, and carrying through of sanitary measures are lacking. In 1903 more than 17,000 cases were reported to the New York Board of Health, thus permitting the authorities to watch them, to control the individual sources of danger arising through them to others, and to assist the patients themselves and their families, when poor and helpless, with the services of a physician and a nurse.

Since 1904 free examination of the sputum in cases of suspected disease has been established by the Board. More than 11,000 specimens were examined in its laboratories in 1903. There are about 200

depots in the metropolis supplied with blanks and the necessary outfits for the collection of sputum, and from which the specimens are regularly collected by officers of the Health Department. Sanitary cuspidors are given free of cost to poor patients, and also to charitable institutions that shelter this class of consumptives.

To give an idea of the extensive work which this Board is doing in the one branch of public instruction with reference to consumption, it suffices to mention that in the last year alone more than 100,000 circulars of information for consumptives and those living with them were issued and distributed throughout the city. Something like three million folders have been placed in the books of the public and other schools, warning scholars against spitting on sidewalks and floors of public places. Lately the Health Board has tried to reach the Labor Unions with its anti-tuberculosis work.

But the Board is doing still more. It has arranged semi-annual censuses of the recorded cases of pulmonary tuberculosis for the better study of the topographical distribution of the disease, and has worked out a map of the city, showing every house-lot where cases of tuberculosis have come under its observation, and deaths from the disease have occurred.

A house to house inspection in the tenement district of the city by physicians and nurses has been organized by the Board with the purpose of reporting suspicious or actual cases of consumption which have not been brought to the knowledge of the authorities, and of rendering assistance of all kind, where it might be required. The disinfection of premises, either occupied or left by consumptives, pre-eminently in the sections of the poor residents, is assiduously and scrupulously carried through by the Board of Health. To make its work as much as possible complete, the Board is constantly trying to interest in it other municipal departments and private organizations which in some way or other are placed in the position of improving the sanitary conditions of the city, and of pro-

viding for the needy consumptives. New and better laws connected with sanitation matters are persistently sought for by the Board, and as soon as obtained, are put to practice without delay. The Board of Health keeps a strict watch over the provision and cattle markets, and also takes great pains in securing to the citizens pure and unadulterated milk products. In one word, no subject requiring supervision of the health authorities is overlooked or neglected. Even the unscrupulous quacks with their fake tuberculosis panaceas are not left unmolested. When we take in consideration that the Board of Health of New York is giving the same attention to other germ diseases constantly running their course in the city, and to the general maintenance of good sanitary conditions in the enormous domain under its jurisdiction, we must bow in deep reverence to the greatness of men like Herman M. Biggs, who is the soul of this Board, and to his chief and associates. No wonder that the total tuberculosis death rate in New York for the last sixteen years shows a decrease of fully forty per cent.

Fortunately this excellent Board does not stand alone in its efficient anti-tuberculosis work. Of other cities, Philadelphia, Boston, Baltimore, Chicago; and of the States, Maryland, Minnesota, Illinois, and a few more, are also blessed with men of the Biggs type, who, even laboring under unfavorable conditions, have yet succeeded in raising their local health departments to the height of usefulness and importance which the tax payers of their respective communities are entitled to expect from them. In all these cities and states the mortality of consumption shows the same gratifying figures of decrease for the last ten or fifteen years.

The efforts of the Health Department would not have yielded the results already obtained were they not backed by the energetic and intelligent support of physicians, private citizens, and associations organized with the object of fighting tuberculosis. Most of the latter are of recent date, but their importance for the future success of

the work under discussion can not be highly enough estimated. There are by this time about thirty-five associations in this country for the prevention and study of tuberculosis, of which four are in New York State and three in Ohio; Colorado, of course, is represented in this list with the zero symbol. One of the most important among these organizations is "The Henry Phipps Institute for the Study, Prevention and Treatment of Tuberculosis" in Philadelphia under the direction of Dr. Lawrence F. Flick. The Institute maintains a laboratory for research, a hospital for advanced cases and a free clinic. Popular lectures and other educational propaganda are a conspicuous feature of the Institute. "The National Association for the Study and Prevention of Tuberculosis," which is an outgrowth of the Tuberculosis Exposition held in January, 1904, in Baltimore, under the auspices of the Maryland Tuberculosis Committee, counts among its officers and members the greatest medical authorities of the country, such as Drs. Osler, Trudeau, Biggs, Sternberg, Solly, etc. To mention only a few more of the conspicuous organizations that deserve to be known, attention is called to "The Committee on the Prevention of Tuberculosis of the Charity Organization Society of New York," "The Tuberculosis Department of the United Hebrew Charities of New York," to similar associations in Baltimore, Boston, etc. Altogether, only in fifteen of the states of the Union has the active interest in the tuberculosis question taken shape in the form of organized bodies.

Valuable and productive as are all these efforts combined, they overshadow for the present the pressing need of providing hospitals, sanatoria, health camps, and suitable accommodations in general, for the middle class, and particularly for the poor consumptives. The total number of beds in this country for consumptives in all kinds of institutions, and for patients in the different stages of the disease is about 8,000, and one-third of them are to be found in New York State. More than one-half of

the beds belong to institutions admitting only pay patients. Considering that over 100,000 deaths are annually caused in the United States from tuberculosis, we must blushinglly confess that such a disproportion between the tubercular sick crying for shelter, and the places to offer it to them, is for one of the wealthiest countries in the world a record not to be proud of. It is estimated that hardly two per cent of the consumptives of this country can take advantage of the most essential necessities for a patient of that character, which consist in fresh air, sunshine and proper food.

The well-to-do are, of course, not so helpless, although they also meet with difficulties when desiring to enter a sanatorium. They want there chiefly, if not exclusively, cases in the incipient stage of the disease with an almost guaranteed prospect of recovery. This Draconic rule prevails with still more strictness in institutions supported by charitable organizations. With the exception of hardly half a dozen charitable sanatoria which deviate from that line, the gates are everywhere shut in the face of the unhappy "chronic." The convict, the idiot, the epileptic, the insane, the cripple, all these are more or less provided for by special institutions that keep them for years to vegetate, and to be an unproductive burden to the state or municipality. Nobody disputes the moral right of these unfortunates to be taken care of by their local governments; but why should the victim of "sweat-shops," of factories, and of unhappy social conditions, be denied that same privilege? Is it, indeed, just and humane that only incipient consumptives with a fair chance of being made able to repay society the expenses of their maintenance, should be looked for, while those threatened with a prolonged disease, or even with death, should be treated as outcasts?

Of dispensaries established for consumptives there are only thirty-two in the United States. About 10,000 patients have received treatment in them during the last year.

Public hospitals and sanatoria main-

tained by states and municipalities are so few in this country that they can be counted on the fingers. State and city sanatoria are already in operation in New York and Massachusetts; in Rhode Island the buildings will be opened for applicants this year; New Jersey has secured grounds and has appropriated funds for buildings and equipments; in Maine and Ohio initial appropriations have been granted, and in sixteen other States (Colorado *not* being among them), plans have been worked out, and efforts are being made to create such institutions in the near future. Of sanatoria for consumptives established and supported by the Federal Government there are three: the Naval Hospital in Pensacola, Florida; the U. S. General Hospital for tuberculous soldiers in Fort Bayard, N. M., where civilians paying from five to eight dollars a week are also admitted, and the Public Health's Marine Hospital in Fort Stanton, N. M.

Of the several dozen charitable and private, free and pay homes, sanatoria and hospitals for consumptives existing in this country, some present very interesting features, and are admirably conducted, but the limited time allotted to this paper would not permit of going into details. Denver has several of them, of which the community should be proud.

We can see from this cursory sketch that the field of useful and urgent work with regard to the tuberculosis question is in the United States a soil that so far has been cultivated in patches, and by superficial ploughing of the surface. One has only to bear in mind that every day 3,000, and each minute of the day two victims, give up their lives from consumption in this country alone, to properly size up the monster-enemy against whom the fight has been started. The actual number of ambulant consumptives existing in the United States will never be exactly found out. Besides those that we know of, so many people harbor the germs in their bodies without being aware of the fact themselves. Pains-taking post-mortem examinations have demonstrated that nearly ninety-seven per

cent of human bodies show up some kind of tubercular lesion. Fortunately the degree of resistance to the germ is adequate to the extraordinary susceptibility of the human race to the tuberculous infection. Who can tell where and when, in the individual case, this resistance may come to naught?

The conclusions drawn from these statements are obvious: We must jointly and untiringly, both from altruistic and selfish motives, combat tuberculosis.

*SOURCES OF INFECTION IN TUBERCULOSIS.**

WM. C. MITCHELL, M.D., Denver.

All questions as to the sources of contagion in tuberculosis as well as to the etiology of this disease, must commence with the sentence formulated by Koch in 1882, which he announced in his epoch-making work on the etiology of tuberculosis, namely, "The tubercle bacillus is not only a cause of tuberculosis but it is the only cause of the same, and without the tubercle bacillus no such thing as tuberculosis is possible." In the twenty-three years that have passed since Koch announced this dictum, we have seen this postulate proved so many times that to-day it sounds trite in the saying.

It being true then that there is no tuberculosis without the tubercle bacillus, for a proper understanding of how this bacillus is given off by those afflicted with tuberculosis, its fate after it is cast out of the animal body, and how the thus freed bacilli eventually obtain entrance into the systems of new victims, a knowledge of the complete life history of this remarkable germ is absolutely essential.

The tubercle bacillus is an absolute parasite, it can only multiply and exercise its functions when the temperature in which it finds itself approximates that of the warm blooded animals, hence when it is cast off into the outside world from the body of the person or animal harboring it, it

is unable to find the proper conditions for its growth and development in its new environment. It does not die at once, however, it is only dormant, with its life's functions held in abeyance until by some unhappy chance it is conveyed into the body of some new host, where amid the congenial surroundings of warmth, moisture and food, each germ may develop into like of its kind and unfold its subtle chemistry to the detriment and the decimation of its victim.

It is an undecided question at the present time as to whether or not the tubercle bacillus forms spores. There are two reasons for believing that it does, one is the great length of time after which the bacilli are capable of development after having been exposed to adverse condition of life outside of some animal body. The other reason is because of the presence of certain oval refractile bodies which not infrequently appear in the tubercle bacillus. Schumowski has shown, however, that these forms are no more resistant to heat or chemical agents than are the plain forms of this bacillus, thus bringing their sporiferous nature very much in question. The attitude which is coming more into prominence at the present time is to attribute the hardness of the tubercle bacillus to the great amount of wax which this bacillus contains in its protoplasm.

Numerous experiments have established the fact of the comparatively great length of time after which the tubercle bacillus is capable of growth and multiplication. Fischer and Schill (2) found tubercle bacilli still possessed their virulence in putrid sputum up to forty-three days, and in dried air up to 186 days. DeThoma found it virulent up to ten months; Cadec and Malet found desiccated and powdered lungs still virulent at forty-three days. Sormani found dried sputum virulent at two months, and in water at ten months.

Direct sunlight kills cultures at from a few minutes to several hours according to Koch, and Strauss found bacillon cultures

*Read before the Academy of Medicine, March 31, 1905.

killed in two hours. Mignaceo found dried sputum was not killed until from twenty to thirty hours in Italy, and at the altitude of Denver, Mitchell and Crouch found dried sputum to be quite virulent up to twenty hours exposure, after which the virulence became attenuated and was lost above thirty-five hours exposure.

It being settled then that the tubercle bacilli may live for many weeks or months, as the case may be, after they are expelled sential to ascertain: (1) Are all species of the tubercle bacillus identical, whether they emanate from man or the lower animals. (2) How are these bacilli given off from the diseased person or animal. (3) How do these bacilli re-obtain entrance into the bodies of their new victims.

In Koch's original work, he considered the tubercle bacillus to be one and the same species whether it originated in man or the lower animals. This first classification was shown to be wrong and was brought to light by the curious discrepancies in the biological characteristics of this organism as published by Koch and his pupils in Germany and by Maffucci in Italy and by Nocard and Roux, Yersin and Metchnikoff in France. It was found that the French observers had been working with a culture taken from a case of poultry tuberculosis. The avian bacillus, as is now well known, grows at a much higher temperature, and besides having other cultural peculiarities, does not cause an infection when inoculated into mammals with near the regularity or virulence that the mammalian bacillus does. Vice versa, it may be mentioned that the mammalian bacillus is comparatively harmless when injected into fowls. Later, however, Nocard showed that when the mammalian bacillus was modified by cultivating it in collodion sacks in the peritoneal cavity of chickens, it finally became modified so that it could cause tuberculosis in these bipeds. Conversely, Courmont and Dor showed that by gradually accustoming the avian bacillus to lower temperatures, combined with passages through the rabbit, that it finally became pathogenic for some mammalia. These

experiments demonstrate that the mammalian and avian bacilli are but varieties of one and the same species whose different biological characteristics have been acquired in their respectively different environments. Although proof is wanting, the same is doubtless true of tuberculosis of fish and other cold blooded animals. Practically, these experiments show that the danger of human beings contracting tuberculosis from tuberculous poultry must always be considered.

Romer (4) has lately added convincing proofs to this view. He finds guinea pigs inoculated with mammalian bacilli react typically to tuberculin made from avian cultures, and further cites an epizootic of tuberculosis among chickens caused by eating the tuberculous organs of a cow. Bacilli obtained from these fowls were virulent for mammals, even for cattle.

In addition to the avian variety, there yet remains the great and important classification known as the mammalian. For many years the identity of all mammalian bacilli went unchallenged and all measures at prophylaxis were directed not only towards rendering the secretions of tubercular individuals sterile as soon as the bacilli-laden secretions left the body, but also towards condemning such of the meat and secretions of the lower animals afflicted with tuberculosis as might be used for human food. Imagine then the consternation which was produced in the ranks of sanitarians when at the British Congress on Tuberculosis held in 1901, Koch (5), the great master on tuberculosis, announced that in his opinion the bovine and the human bacillus were radically different and that there was no danger of the contamination of human beings with milk or meat from tubercular cattle. That there may be no misunderstanding, I will quote Koch's own words: "I should estimate that the extent of infection by milk and flesh of tubercular cattle and the butter made of their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it." He further stated that

in the immense post mortem material at the Charite in Berlin there had been but five cases of primary tuberculosis of the intestines in five years. In 993 necropsies on children, Baginsky did not find a case. Biedert found sixteen cases in 3,104 necropsies.

As experimental proof he offered the negative results obtained by inoculating nineteen calves, six pigs, besides donkeys, sheep and goats. In none of these animals could he produce tuberculosis with human sputum or cultures from the same. Six of the calves were fed almost daily for from seven to eight months with tubercular sputum. When these experiments were repeated with bovine bacilli, infection occurred in every case.

These views were combated vigorously by certain delegates to the congress, especially by McFadyean (6) who cited quite a different array of post mortem statistics. Still found 29.1 per cent. of cases at the Hospital for Sick Children, and Shannon 28.1 per cent. at the Royal Edinburg Hospital, to be primary infections by the intestinal tract. Ravel, in an interesting paper before the same congress, concludes as a result of painstaking work that "the bovine bacillus has a high degree of pathogenic power for man also, which is especially manifest in the early years of life." Without going further into the literature, it may be mentioned that Chauveau and Klebs and Bollinger in prebacterial days, and Prettner, Arloing, Vадges, Theobald Smith, v. Behring, Ravel and others since then, have all been successful in obtaining positive results. It is also well established that tubercular cattle will react to tuberculin made from the human bacillus. As further proof tending to establish the identity of these two species, Behring states that he has been unable to find any qualitatively different tubercular toxins in any of his cultures, no matter whence their origin or what their treatment. Pfeiffer, Jadaassohn, Priester, Ravel, Krause and Lassar have all reported cases of tubercular infection in man, either local or general, re-

sulting from autopsies upon tubercular cattle.

As a result of Koch's communication several commissions were formed to investigate this important matter. In a preliminary report by Kossel (7), chairman of the German commission, many interesting facts are added to our knowledge of this subject. Out of 39 freshly obtained cultures from human sources, 19 had no effect on cattle, 16 produced more or less localized infections, while the remaining four cultures caused generalized tuberculosis.

In drawing conclusions from this mass of evidence and other facts, it seems justifiable to regard the human and the bovine bacillus as varieties of the same species, with the bovine bacillus as much the more virulent of the two and therefore all the more dangerous to mankind.

As to how these bacilli are given off from the diseased person or animal harboring them, the matter is very simple. In pulmonary tuberculosis the number of bacilli given off in the sputum sometimes reaches an almost incredible number, and in the care and sterilization of the sputum of *phthisical* patients is largely bound up the prophylaxis of tuberculosis. The breath of the consumptive is free from germs, as was shown by Naegalis; but in the act of coughing and even speaking some of the moist particles are torn from the mucous membrane and produce a fine spray in the immediate neighborhood of the patient, as was shown by Cornet, Fluegge and Laschtschenko, the so-called droplet infection. In tuberculosis of the bowels and of the genito-urinary tract, the bacilli may be given off in these secretions in considerable numbers and also form sources of infection. Tubercular cows give off the bacilli in their milk, and in addition the fact of their flesh and organs containing the bacilli must also be considered.

This brings us to the consideration of the third part of our subject, namely, how these bacilli re-obtain entrance into the bodies of their new victims. Leaving out of consideration the direct transmission of

the bacillus to the newly formed fetus, the matter resolves itself under three heads: infection by direct contact, by inhalation, and by way of the gastro-intestinal tract. Infection by direct contact is almost wholly confined to the veterinarian and the pathologist, although infection by kissing tubercular subjects must also be considered. Infection by inhalation is almost universally regarded as *the* great source of infection. The ease with which the tubercular patients may scatter their sputum and other secretions, the hardness of the bacillus under adverse conditions of life, the facility with which these secretions may become pulverized and scattered in the air and be inhaled, together with the chief seat of this disease being the lungs, are all weighty factors which contribute to the soundness of the view that inhalation is the chief source of contagion in tuberculosis.

Infection by way of the gastro-intestinal tract has always been acknowledged as a source of infection, but has been regarded as of very much less frequent occurrence than infection by inhalation. The great amount of money that has been expended in the diagnosis and extirpation of tuberculous cattle was done, not so much because this was thought to be the chief source of the trouble, but because it was much easier to frame laws and enforce hygienic measures against tubercular cattle than against tubercular beings.

In an address delivered by Behring (9) on Combating Tuberculosis, before the seventy-fifth congress of naturalists and physicians at Kassel in 1903, he stated as his belief that the infant's diet of milk was the chief source of infection in tuberculosis. This radically different view of the opinion commonly held by sanitarians coming from a man of Behring's weight and authority compels us to at least investigate the proofs offered by him as supporting this theory. Behring starts with the accidental discovery made by Romer, one of his assistants, that albumin when taken into the infantile gastro-intestinal tract passes out into the circulation exactly as if it had been injected therein, i. e., it is not

converted into peptone and digested as it is in later life when the mucous membrane is fully developed. In other words, the infantile mucous membrane is regarded as a porous sieve through which the infantile diet of milk and all the bacteria contained therein pass directly into the circulation. Anti-toxin, which contains healing antibodies bound up in albuminous molecules, given by the stomach to the newly born was obtained almost quantitatively in the blood. Hardly a trace will pass into the blood when the mucous membrane is developed to the digestive stage. Different bacteria, among them tubercle bacilli, when fed to infantile laboratory animals were found to pass directly into the circulation and lodge at will throughout the body. Hence, Behring believes almost all cases of pulmonary tuberculosis to be of infantile origin and that the vehicle of contagion has been milk, either milk from a tubercular cow, or milk infected by contact with tubercular persons, or dried tubercular dust, etc., in its journey from the stable to its final delivery. He does not deny the possibility of infection by breathing the bacilli directly into the lungs, but thinks that these infections seldom lead to pulmonary tuberculosis proper. It is only when the ground work has been laid in infancy that the latter, under such adverse conditions of health, hygiene and the superimposed infection of inhalation-tuberculosis are united that the condition develops into one of tuberculosis proper. This brings the question back, according to Behring, to somewhat near the old belief of the heredity of tuberculosis, only we must consider the infection as post genital instead of pre natal.

Thus we see that Koch and Behring, who may be regarded as the greatest living authorities on the sources of contagion in tuberculosis, attack this problem from diametrically opposite points: one believes the pulverized sputum to be the chief source and denies the danger of cows' milk, the other believes cows' milk to be the chief source whether it be from the bovine bacillus inherent in the tubercular cow's milk or whether the milk is infected with human

bacilli. Until these bacteriologic giants settle the various points at issue, it is well to regard all forms of the tubercle bacillus as dangerous, whether they be avian, bovine or human, and to exercise all known precautions to prevent their coming in contact in any manner with the human organism.

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MIXED INFECTION IN PHTHISIS*

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By mixed infection in tuberculosis we mean the presence of other micro-organisms associated with the tubercle bacilli in the pathologic process. How often have we seen cases of acute tuberculosis follow an attack of measles, whooping-cough, scarlet fever, typhoid fever or la grippe? Not that any of these diseases is the direct cause of the tuberculosis, but that the tubercle bacillus was already in the body in a latent or encapsulated state and the action of the associated micro-organisms that caused the disease had the effect of breaking down the protecting wall that Old Mother Nature had built about the tubercular focus, with the result that the inclosed tubercle bacilli were allowed to escape into the tissues, lymphatics, or blood stream; and according to the number and virulence of the escaping germs we have an acute attack of tuberculosis anywhere, from a mild case that recovers in a short time up to the most severe form of acute miliary tuberculosis.

Most writers in speaking of infection,

though, have reference to the pyogenic organisms found associated with the tubercle bacilli in the ordinary cases of phthisis. It is this class of cases that go to make up the big majority of the vast horde of consumptives that come every year to our state seeking health from our pure mountain air and months of sunshine.

Our text books give us little or nothing on mixed infection. Osler devotes seventy pages to tuberculosis but only one line and a half to mixed infection. "In tuberculosis of the lungs the suppuration is largely the result of an infection with pus organisms."

Cornet, in his work on tuberculosis, which is most exhaustive on all other phases of the disease, devotes but sixteen lines to mixed infection. He says: "The pathological processes are attended by the presence in the tubercular areas of pathogenic bacteria. These are pre-eminently streptococci." (Chapter on Pathology.)

Krause, in discussing the causes of the failure of tuberculin in what he calls the "first tuberculin area," says that mixed infection was present in a great majority of the cases treated and was not taken into consideration as a factor in the cause of the failure of the cases to recover."

Sata, of Japan, writes: "The variety of fevers of tuberculosis depends on the variety of the etiological factors. Various micro-organisms are found in the sputum, in the lungs, and in the blood of consumptives. The influence of the mixed infection on the tubercular process is very great. The most important symptoms are fever, abundant expectorations and extensive pneumonias. The broncho-pneumonia of consumptives is excited by mixed bacteria. The principal micro-organisms of mixed pneumonia are the streptococcus pyogenes, staphylococcus pyogenes, the diplococcus of Fraenkel, and the influenza bacillus."

Park, in his work on bacteriology (page 305), says: "The majority of cases of pulmonary tuberculosis show mixed infection, especially the streptococcus and pneumo-

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coccus. These cases may be active with fever, or passive without fever, according perhaps as the parenchyma of the lung is invaded by the bacteria; or they are only superficially located in cavities or bronchi. It is the uncomplicated forms of phthisis where one must expect the best results from treatment with tuberculin or anti-tuberculous serum."

From all the different authorities we gather the same opinion, viz., that the destructive process—breaking down with cavity formation—in the lungs is caused not by the tubercle bacilli but by the invasion of pyogenic bacteria into and about the tubercular area. The tendency of the tubercle bacilli is to produce fibroid tissue and a walling in process or encapsulation.

During the process of resolution of the tubercle, that is to say, during coagulation, necrosis, caseation, liquification and absorption, or calcification, the capsule may become very thin and easily ruptured, but without the aid of the associated infection to destroy the new tissue, resolution goes on to completion, and we have the so-called obsolete or tuberculous scar. This we might call nature's cure. The bacteria that seem to be the most active and the most often met with in the destruction process are the streptococcus and the staphylococcus pyogenes.

It is this class of infection that I wish to refer to at the present time—not because it may be more important than any other class of mixed infection in phthisis, but because of its frequency—not only in tuberculosis, but in bronchitis, bronchiectasis and pneumonia—and its curability. My experience has been, that most cases of advanced tuberculosis or phthisis have mixed infection with the accompanying loss of lung tissue, from suppuration. The absorption of the toxins and other products of suppuration produces a chain of symptoms that we are all familiar with—loss of appetite, emaciation, high fever, chills and night sweats.

Until recently phthisis with streptococcic infection was not amenable to treatment that gave any very satisfactory re-

sults. It generally ran a more or less prolonged course, until such time as an immunity was established or economy had been overcome. In case of recovery from such an attack there is more or less lung tissue destroyed, and before the patient can regain his lost strength, he may be subject to another attack of similar character with more dreadful results.

"He, who for a long time has been occupied with the treatment of tuberculosis in the stage of mixed infection, knows quite well that the appearance of high fever determines the date from which life must be looked upon as lost, provided, of course, that the proper measures for combating the mixed infection are not successful." (Krusen.)

About ten months ago I became interested in the serum treatment for streptococcic infection of the lungs and bronchi, and since that time have seen thirty-two cases of mixed infection, three with influenza bacillus and twenty-nine with streptococcus and staphylococcus. The three with the influenza mixed infection died; of the other twenty-nine all recovered from their mixed infection and are either apparently well of their tubercular trouble or in a fair way to recovery, except one. He had several severe hemorrhages and died. I did not, as most physicians, try the remedy on my patients first, but on myself. About February 1, 1904, I got streptococcic infection of a cavity, which I have in the upper part of my right lung, with all the accompanying symptoms and conditions. I lost twelve pounds in ten days, and matters looked rather serious for me. I took twelve doses of streptolytic serum in twelve days and had the pleasure of seeing all the symptoms subside, the infection vanish, a return of appetite, followed by a gain of the weight lost plus eight pounds. I have had no return of the infection since, as repeated microscopic examinations of the sputum has shown. I shall only report a few of the other cases, as to take all up in detail would take too much time and space, and a recital of cases, all very much alike, would become tiresome.

Case No. 140: E. H. M., aged 29, came to Colorado in 1894, for tuberculosis, apparently fully recovering with the exception of morning cough and a tendency to "take cold." January 1, 1904, weight 225 pounds; about February 1, 1904, he contracted apparently a "cold." February 20, 1904, examination revealed extensive bronchitis; temperature 101° to 103° F., pulse 100 to 112, weight 185 pounds; chills and night sweats. Microscopical examination of sputum showed myriads of streptococci and staphylococci. No tubercle bacilli. He was given six doses of 10 cc each of streptolytic serum in six days, when cough subsided, temperature became normal, night sweats ceased and all the other symptoms disappeared; weight December 1, 1904, 230 pounds.

Case No. 141: E. F., female, aged 28, weight 107 pounds, consulted me for "unresolved pneumonia." January 30, 1904, examination of chest showed almost complete consolidation of upper lobe of right lung, with moisture and rales all over the back of lower lobe. Temperature 102° - 104° F. Chills, night sweats and excessive cough. Microscopic examination of sputum showed numerous tubercle bacilli, streptococci, staphylococci and diplococci of pneumonia. It took some time to convince her friends of the seriousness of her condition. February 27, 1904, I began the use of streptolytic serum and gave ten doses in fourteen days, at the end of which time all the symptoms had disappeared, lung all cleared up except a spot opposite third rib, where there is some breaking down with cavity formation. During the spring she was put on tuberculin treatment and gained about eighteen pounds. Tubercle bacilli all disappeared and she became the picture of health.

Case No. 160: M. J., female, aged 27, weight 118 pounds, a counterpart of No. 141, only her left lung was involved. She had been treated for "typhoid pneumonia" for 3 or 4 weeks. The history of her case shows that she has had tuberculosis for over three years. At first I found no mixed

infection, but further examination of sputum showed mixed infection similar to Case No. 141. This patient received 130 cc of streptolytic serum with similar results to the previous case.

I have reported these two cases together on account of their similarity; also because both had a recurrence of their mixed infection about the same time, viz., November 1, 1904, apparently from the same cause. During their illness they both wore heavy woolen lounging robes which were put away for the summer; taken out about October 1st, and both cases developed acute streptococcic infection of the lungs and were again given the serum with the same good results, only it required more serum in both cases.

Case No. 141 had no breaking down of the tubercular foci, while Case No. 160 showed numerous tubercle bacilli in the sputum, which probably came from a cavity of the upper lobe. Her general condition is good, and were it not for her cough no one would suspect she was tuberculous at the present time. Weight, 138 pounds. Case No. 143: J. K., male, aged 35, weight 114 pounds. This was, I think, the worst specimen of humanity with phthisis I ever attempted to treat. The extent of the tubercular lesion proved not to be so great, but he was emaciated, pale, had excessive cough and expectoration, high temperature, rapid pulse, over 120, and had lost 30 pounds in ten months. He had chills and sweats every night. He had caseous pneumonia of whole left lung; mixed infection, with all the accompanying symptoms. For three months had been unable to lie down at night and sleep. He received in all 16 doses of 10 cc each of serum with the most beautiful results. After the second dose he was able to lie down and sleep all night, and immediately began to improve. After April 1, 1904, I put him on tuberculin for three months. By October 1st he had gained 26 pounds. No cough, no expectoration. No tubercle bacilli in sputum since July, 1904. November 20, his brother reported him still well and

gaining in weight and earning his own living. Without the streptolytic serum I don't think he had one chance in a thousand to live six months.

Case No. 164: N. C., female, aged 29, weight 140 pounds, seen first July 6, 1904. She had been treated two weeks for typhoid fever and bronchitis. She came to Colorado in 1900 for tuberculosis. Examination revealed moisture over both apices and coarse rales over the upper part of both lungs. Temperature 102° - 103° F. Pulse 100-120. Each day she had a chill followed by rise of temperature and sweats at night. Microscopical examination showed numerous streptococci and staphylococci in sputum. No tubercle bacilli. After the diagnosis was made the only remedies she received were small doses of heroin the first 48 hours to quiet the cough, and streptolytic serum. Eight doses were given, followed by complete recovery. At present she weighs 156 pounds.

In each case I found the same good results followed the use of the serum. The fever disappeared, cough and expectoration subsided, the appetite returned, and the patient had a feeling of well being and began to put on weight. The only troublesome symptoms I noticed were urticaria in about 50% of the cases and arthritis in two. There were no abscesses, no inconvenience of any sort at the seat of injection after the lapse of a few hours.

I have had no experience with the serum outside of streptococcic infection of the lungs and bronchi. Malsbary reports a case of streptococcic rheumatism cured by antistreptococcus serum. (Medical Record, Dec. 10, 1904).

From the literature at hand and my own observations I have drawn the following conclusions:

First: Tuberculosis is not such a formidable disease as we were led to believe in the past, when it is uncomplicated with pyogenic bacteria.

Second: Mixed infection is the cause of death in the great majority of cases of consumption; while pure tuberculosis has

a tendency to recover, as post-mortem examinations properly carried out have demonstrated. Osler's Practice of Medicine, page 332, 1901 edition, reads as follows:

"The statement by Bouchard is that, of the post-mortems at the Paris morgue—generally on persons dying suddenly—the percentage found with some evidence of tuberculous lesions, active or obsolete, is as high as 75%. Large as these figures appear, they are probably very incorrect. If, as has been done in Ribbert's laboratory, a systematic inspection is made for the purpose, tuberculous lesions are found in practically 100% of the bodies of adults."

Third: Most cases of phthisis are complicated with mixed infection, and in the great majority the associated micro-organisms are the streptococcus pyogenes and the staphylococcus pyogenes, while a few have the diplococcus of pneumonia. The influenza bacillus may be present during an epidemic, and, when virulent, seems to cause a more rapid spread of the tuberculosis than any of the other bacteria, especially in advanced cases.

Fourth: Mixed infection with the streptococcus in phthisis, bronchitis, bronchiectasis and pneumonia, is amenable to treatment with streptolytic serum.

Fifth: Cases of phthisis with streptococcic infection, when treated with a sufficient quantity of streptolytic serum and the infection removed, revert back from the so-called cases of consumption, to cases of pure tuberculosis, with vastly greater chances for the arrest of the disease, or ultimate recovery, under proper care and treatment, if there be not too much tissue destroyed or the tubercular condition be not too widely distributed through the lung or involve other vital organs.

Sixth: Intercurrent diseases of microbial origin have a tendency to destroy or break down nature's barriers that have been built about the tubercular focus, thus allowing the escape of the contents of the tubercle, and when living bacilli are present, set up an acute attack of tuberculosis. Hence we see the necessity of protecting all cases with arrested tuberculosis from

contagious diseases or associated infections.

Seventh: Tuberculosis requires years, not for encapsulation, but for complete resolution of the tubercle with the destruction of the imprisoned bacilli.

In closing I would advise that all specimens of sputum for examination for mixed infection be collected in a sterilized vessel, thoroughly washed through several courses of distilled water, and prepared and mounted ready for examination within one hour from the time it was collected. Often it may not be possible to find the offending micro-organism under the microscope even after several trials, for infection seated deep in the parenchyma of the lung may have no communication with the outer world, or the number thrown out may be few and escape notice. Under such circumstances it may be well to make a culture from the thoroughly washed sputum. As in tuberculosis, a negative result with the microscope does not mean absence of the disease. Most recent works on bacteriology and pathology give the technique in detail.

THE FEVER OF PHTHISIS; ITS ETIOLOGY, SEQUELS AND TREATMENT.*

By J. F. McCONNELL, M.D.,
Colorado Springs.

Fever is without exception the most troublesome symptom which the ordinary case of phthisis pulmonalis presents.

The tubercle bacillus undoubtedly gives rise to pyrexia. This organism primarily produces ptomains which invade the body, then having wrought all the damage possible during life, locust like, causes more ravages through its decay, since the protein products of disorganization, like the ptomains in being diffusible, are taken up by the lymph and blood streams, their peculiar constitutional effects ensuing. In support of this contention I cite the reaction following tuberculin injections.

When the single, simple tubercular infection becomes a mixed one—the consumption of clinicians—the fever takes on an added character due to the pyogenic and other bacteria which have found a soil particularly fitted to their needs. The streptococcus pyogenes is most commonly found in the wake—frequently in the van—of the tubercle bacillus, the staphylococcus pyogenes aureus, pneumococcus, bacterium coli commune and bacillus of Pfeiffer less frequently. These organisms and their proteins produce an irritability of the heat center that has, as its resultant, rise in temperature from slight causes.

The irritative action of the toxins which are enabled to penetrate the mucous coating of the sputum will in turn produce febrile reaction. This is frequently met with in the gastric and intestinal disturbances of those who swallow their sputum, not necessarily voluntarily, but most often in patients who are addicted to cough sedatives at bed-time, a great quantity of sputum *overflowing* into the esophagus, owing to an abolition of the reflexes.

It is unnecessary to mention the various intercurrent affections, gastric and intestinal crises, mental and physical unrest; suffice it to state that the phthisical individual reacts more quickly and powerfully to the different circumstances enumerated, and a rise of temperature gives expression to it.

The already poorly nourished body has demands made upon it for more albumin and tissue material, thus lessening the weight. Anorexia is a usual concomitant, digestion and assimilation are below par. What follows? Increased absorption not only of the fat and albumin, *but of the proteins*, the etiologic factors of more fever, bringing about the establishment of the aptly named "vicious circle" in which is a veritable maelstrom of death.

The treatment is largely a disciplinary one; *there is no room for compromise*; the attendant must thoroughly understand the method to be pursued and must enforce his orders.

*Read before the El Paso County Medical Society.

As the principles underlying the "rest" idea in combating the febrile phenomena of phthisis are not usually set forth in the text-books, it may be condoned if some time be devoted to their elucidation. Nowhere is the question better considered than in Mr. Hilton's now classic work on "Rest and Pain." Here is shown the importance of physiologic and mechanic rest in the treatment of injuries. Mr. Hilton calls attention to the analogy existing between morbid processes in joints and affections of the chest, to the fact that pain in the nerve and rigidity of the muscles characterize the first named, thereby imposing rest, and that the same method of anatomic distribution of nerve and muscle governs the pleura. To quote: "The same intercostal nerves which supply the intercostal muscles moving the ribs supply also the serous membrane, the thoracic parietes and the skin over these different but physiologically associated structures, in order to produce harmonious and concerted action during the varied states of respiration. Here then we have the pleura representing the synovial membrane, the intercostal muscles representing the muscular apparatus connected with and moving a joint and the cutaneous branches of the nerves spread over the intercostal muscles assimilated in their arrangement to the cutaneous branches which supply the skin over the insertion of the muscles moving the joint." Moreover, in pleurisy the "spasmodic contraction of the intercostal muscles induced by the inflammatory condition of the pleura is precisely analogous to what we see in joint disease."

The deduction to be made from these wonderfully clear observations is, that nature having caused a restraint in movement of the ribs over the site of the active lesion, there must of necessity be no calling into play of the muscles of forced respiration. In other words a maximum of rest must be secured to the injured tissue.

What are we to expect from rest? Gain of weight, diminished anemia, improved circulation, lessened cardiac irritability,

the promotion of adhesions, the disappearance of the state of fever.

Rest may be classified as limited and cadaveric; the latter is necessary only when the temperature exceeds 102° ; the former consists of rest in bed—the so-called tranquility of repose. The ideal method to pursue is to put the patient to bed in a sleeping-out porch or specially constructed tent or shack; where this is impracticable it is better to rely on placing the patient in bed in a well ventilated room, *keeping him there* in contradistinction to the practice largely in vogue of moving out during the day.

When the fever declines to normal (the two-hour plan of temperature record being maintained) the patient is allowed to sit in a chair for an hour in the morning, if this is not followed by a rise the time is increased by one-half until the patient is permitted to dress and remain up. Great care must be taken at this time not to provoke a return of the febrile disturbance by any indiscretions—if such happens there is but one recourse, back to bed, *under no circumstances compromise the issue.*

Because a patient has a subnormal or normal temperature is no reason why he should not rest before his afternoon rise appears. A patient who habitually presents an afternoon pyrexia should rest all day until such time as the temperature is normal at each of the two-hour inspections.

Granting that all febrile symptoms have disappeared, we have now at our disposal many resources in the way of graduated exertion, maintaining uppermost in our thoughts Brehmer's aphorism, "the healthy man sits down because he is tired, the consumptive *should* sit down so as not to become tired."

If over-exertion is poison, then indeed it is most obvious that at this period medical supervision is more than ordinarily useful. The urine should be carefully examined, for if albumoses be found, then I believe it to be patent that the exercise is productive of a rise in temperature *which is febrile in character*; conversely, the value of this test

is thoroughly apparent. The weight should be watched, noting any increase or its maintenance at a satisfactory height, and all forms of reaction, such as marked pulse acceleration, weakness, palpitation, headache, carefully noted and their repetition avoided.

Respiratory gymnastics are to be especially eschewed; the adhesions which *lower* the rate of absorption of the proteins are destroyed by deep breathing. Again the tubercle bacillus thrives in oxygen; and furthermore aspiration of sputum into unaffected portions of the lung is thereby greatly favored.

We see then that no matter how much value may be attached to deep breathing as a prophylactic measure, it has no place in the treatment of the active lesion.

As I have already stated, *no exercise which calls into action the muscles of forced respiration can be permitted so long as the rib movements over the parts affected are much restrained.*

Alcohol is frequently of considerable value as an adjuvant to rest in the reduction of temperature; its empirical use must nevertheless be condemned. A wineglassful of dry sherry may be advantageously given at the onset of the more rapid rise, to be repeated if a second rise occur. If the fever be ushered in with chill, a hot toddy (10 or 12 per cent. alcohol in the form of whiskey) is best given one hour before the expected chill, judging from the previous day, the patient to be thoroughly covered up. For this purpose nothing equals the Kenwood rug, the *hood* being used so that only the face is exposed.

The diet is an important consideration. If the digestive organs be not disturbed, as not unfrequently happens despite very high temperature, the ordinary diet may be given. If anorexia be present gelatinous foods and barley broth will prove serviceable and not disagreeable. Gradually various nutritive preparations may be introduced, scraped beef, fruits, vegetables in accordance with the judgment of the attendant. Cool dishes are admirable, in

fact, cooling of the food has a most agreeable effect, patients always showing their appreciation.

Sponging is not inadvisable, but the full pack and rubs should be interdicted.

The various preparations—the alleged antipyretics—should never be exhibited in any dosage; the sweats induced are most weakening and depressing.

A word as to the alimentary tract: it is important in all febrile conditions to keep the gut in as clean a condition as possible.

Stomachics may be given when indicated, but as a rule the *bold* plan of open-air rest therapy is all-sufficient, since under this method “digestion waits on appetite, and fresh air is a fore-runner of both.”

I might cite many illustrations from my personal observation where apparently hopeless cases lived to become well and strong, and are useful members of society to-day. Suffice it to state that the *early* (obsta principiis) use of the method hereinbefore recited will give most gratifying results.

SUGGESTIONS TO THE GENERAL PRACTITIONER REGARDING THE SUCCESSFUL PRACTICE OF MEDICINE.

By J. F. KEARNS, M.D., La Junta.

By no means all of those who receive the degree of M.D. and enter into the practice of medicine for a living are successful. The fact that about one-third of all who graduate fall out of the ranks during their early years of practice, and that a great many of those in the profession are merely subsisting and could make a better living for themselves and families at almost any other work goes to prove this.

Owing to the overcrowded condition of the profession, the great number of charlatans and imposters doing business, the average physician, in order to make even a decent living, must not only be a competent, up-to-date man in his work, but must also be a shrewd business man. A combi-

nation of ability and good business methods is as essential to the success and welfare of the physician as they are to that of any other professional or business man.

I do not pretend, in this short paper, to discuss all the essentials necessary for the successful practice of medicine, but will simply touch on a few points I consider among the most important.

First—The physician should have confidence in himself and in his ability to diagnose and treat disease in order to inspire confidence in his patients. The hesitating, doubtful physician, or the one who by word or action will give his patients the impression that he lacks confidence in himself will not as a rule succeed. In order to have confidence in himself and in his ability, he must have the ability. The quack can get along, for a while, on his face and silk hat by flooding the community in which he lives with fake advertising matter; but not so with the physician; he must be competent and up-to-date in his work. This calls for a great deal of work and study outside of the ordinary routine of practice. The careful, painstaking man, when he sees a difficult case, will go to his office and read up in order to do himself and his patient justice. The careless one will trust to luck and very often get left.

Second—Thoroughness in the examination of the patient, whether the examination be in the office or at the bed-side, is very essential to success. Make systematic examination in every case. The physician who will look at a patient's tongue, take his temperature and pulse, and then tap him a little over the coat, or possibly go so far as to place his ear or stethoscope over the outer clothing, in the way of examining the chest, does not as a rule make a very favorable impression on his patient—especially if at any previous time he has consulted a competent physician.

Third—The value of inspection is underestimated by most physicians. So important is this that some of the life insurance companies are trusting to it rather than medical examination. Not only can

a great deal of information be gained by a thorough inspection, but it looks much better to call the patient's attention to defects and abnormal conditions, if there be any, than to have them call your attention to them after you are through with the examination.

Fourth—Suggestive therapeutics plays a larger part in the successful treatment of disease than many physicians realize. The majority of patients are anxious to get well as soon as possible; therefore they are very susceptible to suggestion, because their minds are on relief. All physicians use suggestion when they explain to their patients the nature of the disease, assure them that they are getting along well, when they may look for relief, how the medicine will act, etc. They may not all know that this has much to do with the patient's welfare, but it has; and without it the practice of medicine would be a failure.

Take for example a physician, no matter how renowned he might be, who would go into the sick room, carefully examine the patient, leave some medicine or a prescription, and walk out without making any comment on the case, other than to simply tell them what it was. How long would he practice medicine? Physicians should try to make a strong mental impression on their patients. Careless remarks in the presence of patients or their friends, and lack of sufficient instruction will often bring bad results and are frequent causes for patients asking for a change of physicians.

Fifth—The medicinal treatment should be as simple as possible. Changing the medicine too often or too many half-empty bottles in the sick room looks too much as though it might be an experimental case, and sick people can stand almost anything else better than the thought that they are being experimented upon.

Sixth—Too many physicians instead of doing their own therapeutic thinking, leave that to the manufacturing chemist, and instead of writing a prescription to suit the case prescribe some ready-made compound

for whose formula they depend upon the honesty of the manufacturing chemist. I think it must be admitted by all that the physician who can readily write a good prescription to suit the case in hand is a more competent and reliable man, and will have better success than the one who is not thus qualified and depends upon the ready-made formulae of the manufacturing chemist.

Seventh—Another growing evil that is not helping the financial condition of things any and for which physicians are themselves to blame, is the prescribing of the original package, and dispensing to their patients the samples left at their office. We have only to glance at the labels on the majority of those samples to see that they are not wholly intended for us. If they were the name of the drug or compound on the bottle or package, with the literature that is left would be sufficient. They are intended for the laity and it has much better effect, in the way of advertising, to have them distributed by the physician by asking him to give them a trial when he finds a suitable case. It is the same with the original package; get those things into the hands of the laity once so that they may see the various disorders and diseases they may be used for, and the next time they, or any of their friends, need anything of the kind they will go to the drug store, not to the physician. With all due respect for the welfare of the manufacturing chemist, we should at all times work for the best interest of our own profession.

Eighth—Physicians should not be afraid to send out monthly statements and try to collect their bills. They have as much right to collect their bills promptly as the merchant or any other business man. Yet it is a common failing with medical men that as a rule they are very poor business men. They fail to send out bills and collect promptly for fear they might injure their practice or hurt the feelings of some one, forgetting that if they owe anything they are expected to pay it in full every thirty days.

COUNTY MEDICAL SOCIETIES.

The Boulder County Medical Society held its regular monthly meeting at the Court House, Thursday, May 4, 1905. The members present were: Drs. Reed, Queal, Harlow, C. A. Cattermole, Wood, Campbell, Rodes, Parker, Trovillion, Baird, Gilbert and G. H. Cattermole. Several guests attended the meeting.

Dr. W. W. Reed presented the paper of the evening. His subject was, "**The Relation of the Vomiting of Pregnancy to Toxemia.**" The essayist called attention to the numerous theories which have been advanced to account for the vomiting of pregnancy, puerperal eclampsia and other ailments of pregnancy, but he believed that toxemia best accounts for the symptoms. Among the conditions thought to be caused by such toxemia are nausea, insomnia, vertigo, headache, pruritus, ptialism, kidney of pregnancy, albuminuria of pregnancy, herpes gestationis, puerperal mania, and finally pernicious vomiting and puerperal eclampsia. Edgar was cited as stating that auto-intoxication occurs in pregnancy, and he believes it to be due to hepatic insufficiency. Bouchard claimed that even normally the human body is a receptacle and laboratory of poisons, and that whenever and wherever cell disintegration takes place, there is in consequence an accumulation of poisons. A man eliminates from the kidneys alone, in 52 hours, enough poison to kill himself. There is also evidence of the toxicity of the bile, the secretions from the skin, lungs, and intestinal canal.

Since these various poisons do exist in the body normally and in such large quantities, it seems more than probable, that an auto-intoxication might occur either from an accumulation of an abnormal amount or the abnormal character of the toxins in the system.

The exact identity of the poisons giving rise to the toxemia of pregnancy has not been determined; they most likely vary in kind and are apparently not readily accessible to our present chemical and physiological methods; but there is no longer any doubt about their existence in the blood and their action upon the viscera. It is not necessary to be fully able to recognize the ultimate origin and specific action of the toxins before appreciating their existence and practical importance.

It appears that the toxemia is due originally to a functional disturbance of the liver; anatomical changes being not necessarily present even in the severe or fatal cases. When they

do occur, and are found post-mortem, they have evidently followed the functional disturbance in the liver and there may be, and doubtless have been, several steps between the functional disturbance and the ultimate necrosis of the hepatic cells. The relation of these anatomical changes to the pernicious type of the vomiting of pregnancy is well established, but with reference to the milder forms of vomiting, we cannot say so definitely. It is taught by some that ordinary "morning sickness" is "physiological," and that the severe form is an exaggerated type of the other. Ewing believes the types are identical in their etiology.

Dr. Reed gave the histories of several of his personal cases in which after trying medicinal agents, stretching the cervix, etc., it became necessary to empty the uterus in order to save the lives of the patients. It was suggested that we might do much for the relief of these cases by employing more vigorous methods of elimination.

Dr. Rodes asked why stretching the cervix would relieve the symptoms in many of these cases if the trouble were due to toxemia, and why do so many recover without treatment.

Dr. Chas. Cattermole suggested that the toxins in the maternal circulation might be increased by the waste matter from the foetus.

Dr. Harlow asked whether the amount of urea excreted was an index to the condition of the patient. Dr. Reed believed it was.

It was reported that the City Council had requested the Health Officer and City Attorney to recommend methods for the **control of tuberculous cases**, and for the disinfection of premises occupied by such tuberculous cases. The Council is also getting signs made prohibiting spitting on the sidewalks and in public places. The question of voluntary notification of tuberculous cases by the physicians of Boulder was again brought up and discussed but was favored by only part of the members present.

Interesting **pathological specimens** were exhibited by Dr. Gilbert including a brain which showed softening from a thrombus in the middle cerebral artery; carcinoma of the vas deferens followed by secondary involvement of the right kidney, liver, and both lungs.

Dr. Cattermole exhibited an appendix surrounded by a mass of inflammatory tissue, also a uterus containing multiple fibroids.

The society adjourned to meet again June 1st.

G. H. CATTERMOLÉ, Secretary.

Denver.—The Medical Society of the City and County of Denver met at the Hall of the Denver Academy of Medicine, Tuesday, April 4th.

Practical Anesthesia with Somnoforme and Ether was discussed by Dr. F. W. Kenney. He called attention to the passing of the day when the patient was saturated with an anesthetic and the unpleasant effects or sequels thereof ascribed to the shock. In preparing the patient for the anesthetic the clearing out of the gastrointestinal tract was beneficial. The attitude of the patient's mind had an important influence on the ease with which anesthesia could be reached. If the patient's head were kept low, less anesthetic was required, and it was altogether more satisfactory to the anesthetist. As to relative safety among general anesthetics, nitrous oxid still held first place. But the brevity of the anesthesia it produced and the inconvenience attending its use, ruled it out for most operations. As regards immediate safety, ether stood very high; but it was not free from the risk of causing serious after effects.

He had given somnoforme for about 90 operations, lasting from 1 to 30 minutes, and done on patients ranging from 4 weeks to 65 years in age. He would advise its use only for short operations, lasting 2 to 10 minutes. Given but once for an operation of this character it seemed to cause no alarming symptoms. Only small amounts should be given to patients with low vasomotor tone. Rigidity had been noticed in alcoholics and those who were afraid of the anesthetic. Strong obese patients gave some trouble during recovery. He was not convinced of its value as a preliminary anesthetic. Recovery from it was so rapid that the slower anesthetics had to be rushed, with the attending disadvantages of that procedure, to prevent the patient's return to consciousness.

He had found that ether given by the drop method was very satisfactory. Complete anesthesia was established in from 4 to 6 minutes, with the use of 1½ to 2 fluid ounces of ether for a robust adult. With chloroform he had found the first sign of danger to be respiratory failure. With all general anesthetics respiration was the best guide to the patient's condition. With strong patients, from 8 to 20 years of age, he believed there was little danger from chloroform. Atheroma of the vessels was an indication for chloroform unless associated with a weak heart. Dr. Kenney then gave a practical demonstration of somnoforme anesthesia;

and of anesthesia by ether given by the drop method.

Dr. C. A. Powers thought the administration of the anesthetic was one of the most important and most neglected procedures in surgical work. It should always be in the hands of a competent, experienced anesthetists, and the particular anesthetic should be chosen to suit a competent, experienced anesthetist, and the surgeon acting in conference. He had been favorably impressed by somnoforme, and by the drop method of giving ether.

Dr. W. A. Jayne, from his experience with ether and chloroform, favored their use by the open method. But even after ether given by the drop method he had seen very alarming collapse follow, coming on after the completion of the operation and the withdrawal of the anesthetic.

Dr. E. J. A. Rogers could endorse what Dr. Kenney had said about somnoforme. It effected a revolution in minor surgery. But the anesthesia obtained with it was not always satisfactory. He had resorted to it three times for excision of the rib, and it was followed by no depression, even in a very weak patient. In rectal cases the relaxation of the sphincter was not satisfactory. He would like to emphasize the danger of general anesthetics and particularly of chloroform in emergency surgery. There was also an especial danger to athletes from chloroform. One death he had seen from chloroform had been entirely sudden. There had been no warning from the respiration.

Dr. Henry Sewall in a visit to the hospital of the Mayo Brothers had been greatly impressed by the effects of ether given by the drop method, and especially by the absence of struggling. He had noticed that the anesthetist talked to the patient continuously until consciousness was lost, in such a way as to remove fear and suggest normal sleep.

Dr. S. Simon thought that much depended on the anesthetist's control over the patient.

Dr. Kenney, in closing the discussion emphasized the point that somnoforme should not be immediately repeated, or not repeated more than once. Used but once he believed it safe and it produced no marked change in the circulation. But when repeated it gave rise to cyanosis. It should be used for minor surgical work only. He would not use chloroform for rectal work. He had failed to see any case of

excitement from ether given by the drop method.

Dr. Mary Hawes read a paper upon A Case of Extreme Senile Arterio-Sclerosis Terminating in Death. This paper will be published in full in the next number of *Colorado Medicine*.

Dr. W. N. Beggs exhibited the specimens from a case, probably of Primary Carcinoma of the Right Kidney. The mesenteric glands were enlarged, the left kidney contained one nodule simulating tubercle, and other nodules were found in the liver.

El Paso.—The regular monthly meeting of the El Paso County Medical Society was held at the Antlers hotel Wednesday evening, May 10. There was an excellent attendance of members and several visitors.

Dr. D. P. Mayhew read a paper on *The X-Ray in Thoracic Diagnosis* which was discussed by Drs. C. F. Gardiner and W. H. Swan.

The application of Dr. George A. Boyd to become a member of the Society was presented.

M. P. REYNOLDS, Secretary.

Larimer.—The Larimer County Medical Society met in City Hall, May 3rd. Present: Drs. McHugh, Upson, Stuver and Dr. Partridge of Tinath. The application for membership of Dr. W. E. Miller of Wellington was favorably considered, and he was elected a member of the Society.

Dr. McHugh read a paper on the Influence of Pelvic Inflammations in the Production of Hysteria and Neurasthenia. He called attention to the powerful influence of reflex irritation in the production of hysterical manifestations, and cited a number of interesting cases illustrating various phases of the subject. The paper was discussed by Drs. Partridge, Upson and Stuver, who considered the subject both from the radical operative and the more conservative standpoints, and cases were reported showing the advantages and disadvantages of both methods of treatment.

E. STUVER, Secretary.

Otero.—The May meeting of the Otero County Medical Society was held on the 9th inst. Among other business transacted, it was voted to increase the fee for County Physician at La Junta to \$60 per month, the county to furnish all drugs and surgical supplies, and the duties of Health Officer to be included in the work of the County Physician. According to

a time-honored custom with the society no member of the society places a bid for the work at a lower price than that set by the society. A committee was appointed, consisting of Drs. Edwards, Stubbs and Hall to draft resolutions on the death of Dr. G. W. Phillips, the pioneer physician of Otero County.

Dr. Haskins presented a case of **amputation at the instep**, and a very interesting case showing the results of **proper feeding** in the person of an infant who had been afflicted with a multitude of ills, any one of which was serious enough, seemingly, to have caused its death.

At the next meeting, in June, the last until September, Drs. Corwin and Marbourg of Pueblo, will address the meeting.

E. GARD EDWARDS, Secretary.

Pueblo.—The regular meeting of the Pueblo County Medical Society was held May 16th in McClelland Library.

Dr. W. H. Campbell read a paper on **Gastric Ulcer**. This was a rather exhaustive review of our present knowledge of the etiology, pathology and symptomatology of this malady. Under the heading of Treatment, absolute physiologic rest for the stomach was emphasized. Surgical interference was advocated in acute cases with perforation; repeated hemorrhages which do not yield to medical treatment; chronic cases unaffected by treatment, and when pyloric obstruction exists.

M. J. KEENEY, Secretary.

Weld.—The Weld County Medical Society met in Dr. Law's office in Greeley, 7:30 p. m., May 29, 1905. Present: Drs. Pogue, Spaulding, Mead, Ringle, Call, Hughes, Graham, Church and Law. Visitors Dr. Harmon and Dr. Broman. The president, Dr. Mead took the chair and called to order. Dr. Dyde the secretary, being seriously ill and absent, Dr. Law was requested to act as secretary. The routine business was transacted, and the program of the evening called up.

SYMPOSIUM ON DIPHTHERIA.

Dr. Mead, in the absence of its author, Dr. Dyde, read "The Etiology of Diphtheria. Dr. Spaulding read "The Pathology of Diphtheria;" Dr. Church, "Symptoms and Diagnosis;" Dr. Pogue, "The Complications;" Dr. Hughes, "The Toxins and Antitoxins;" Dr. Ringle, "Tracheotomy and Intubation." Dr. Wood was expected

to read one on "The Treatment," but he being absent, this was omitted from the program.

The papers were all carefully prepared, were interesting, and led to an animated discussion, which took a wide field.

Dr. Spaulding reported two cases, of apparently only catarrhal sore throat, that were followed by paralyzes that he was not able to differentiate from the typical ones that often follow undoubted diphtheria. These cases had both been exposed to undoubted diphtheria. Unfortunately no cultures had been taken from their throats, and Dr. Spaulding was positive that no membrane nor even exudate had ever appeared in their throats or noses. This brought up the question of the possible existence of diphtheria without membrane or exudate. Do paralyzes or other sequels usually attributed to diphtheria ever follow streptococcus infection?

Dr. Graham reported a case of fulminant diphtheria ushered in by violent, uncontrollable vomiting. Antitoxin was used in heroic doses with the usual result of clearing the exudate from the throat. But still the patient (nearly adult lad) continued to vomit, the pulse slowed down to 50, 40, 30, down—down to death. Certainly a case to interest us all.

Dr. Call reiterated his objections to the ruling of our former State Board of Health which was "the diagnosis of diphtheria must be decided by the bacteriological finding." He continued that in very many cases of undoubted clinical diphtheria where swabs of the throat had been made by himself, in as careful manner as he knew how, and sent with all due precautions to the State Bacteriologist, the report had come back, "no diphtheria bacilli found." Dr. Call contended that clinical symptoms when clear and distinct should be regarded as conclusive, even though the bacteriology should be negative. He, however, was always glad to avail himself of the positive findings of bacteriology.

Dr. Spaulding, Medical Officer of Greeley Health Board, announced that Dr. Taylor of the present State Board had ruled in accordance with Dr. Call's views.

Dr. Graham pleaded for more careful and extended quarantine, and that the State examination for bacteria should always be made. Questions called up: How long will antitoxin protect? To what extent does one attack of diphtheria confer immunity?

G. LAW, Secretary, pro tem.

DENVER ACADEMY OF MEDICINE.

The meeting of March 31st was devoted to a symposium on:

Practical Efforts For the Suppression of Consumption.

This was opened by a paper upon What is Doing in America in the Fight Against Consumption, by Dr. A. Zederbaum. This paper is printed in full, page 153 of this issue.

Dr. Eleanor Lawney presented brief statistics regarding the prevalence of consumption in State Institutions, which had been gathered during the past two years by means of quarterly reports from each of these institutions. Throughout the State 16 per cent of all deaths had been from tuberculosis. At the Hospital for the Insane, among an average of 522 patients, there had been 70 deaths, 4 from tuberculosis. At the Reformatory at Buena Vista with 125 prisoners there had been 4 cases of tuberculosis and no deaths. At the State penitentiary with an average number of 668 prisoners there had been 18 deaths in the biennial period, two of them from tuberculosis. In December, 1904, there were 7 cases in the latter institution, one of which had been acquired there.

Special Institutions.—The Rev. F. W. Oakes described what had been designed and accomplished in the institution that had been built up through his efforts. He had seen in Denver those who had come for a climatic cure of consumption as pre-eminently a homeless class, and he had endeavored to supply for them not a sanatorium, but a well-regulated, refined, scientifically clean home. This was the first department of his institution. In addition there was second, a building for the care of the very ill who required much nursing. The third department was designed to furnish the same care and advantages to persons of limited means for a rate of \$25.00 per month, or less. In addition to these there was fourth a department of cottages, fifth a chapel always open, and sixth a nurses' home. His complete plan embraced workshops where persons could become partly or entirely self supporting.

Dr. Watterson in charge of the Health Farm established by the Y. M. C. A. West of Denver, reported the work done in that institution.

Dr. G. W. Holden, superintendent of the Agnes Memorial Sanatorium, described the building, and the institutional routine, by which that institution was endeavoring to secure the

best possible results from the sanatorium treatment of consumption.

Dr. W. C. Mitchell read a paper on **Sources of contagion**, published page 154 of this issue.

Dr. J. N. Hall said that in 1893 consumption caused 11 per cent, and in 1898, 20 per cent of the deaths in Colorado. Indigenous cases of the disease attracted attention about ten years ago. The state was peculiarly exposed to infection. Tuberculin tests in a number of dairies showed that about 3 per cent of the dairy cows gave a tuberculosis reaction. The important measures to carry out were abatement of spitting, disinfection of rooms, and the segregation of patients—providing institutions for those who could not otherwise be properly cared for. Cases should be reported, not for quarantine, but in order that the patients might be instructed. The patients must be told that they have tuberculosis in order that they may do what is demanded for their own best interests and the health of the community. A crying need was early diagnosis—to have the disease recognized before it had done irreparable damage.

Dr. C. B. Van Zant discussed the **personal hygiene of those predisposed to consumption** under the heads of proper food, separate rooms, out door life, climatic change before infection occurred, avoidance of depressing influences, special care during convalescence from acute disease, a cure of any predisposing local conditions, and a general hardening by cool bathing.

Dr. Robert Levy said that education was needed with regard to direct contagion. We see more cases that originate in Colorado because the patients that come here have not been educated as to the danger of spreading the infection. Training in hygiene was considered too lightly.

DENVER CLINICAL AND PATHOLOGICAL SOCIETY.

The regular monthly meeting of the Denver Clinical and Pathological Society was held May 12th at the offices of Dr. Stover.

Dr. Powers exhibited the greater part of the omentum from a boy of 10 years, operated on for scrotal hernia. **Tubercular involvement of the peritoneum**, not suspected before operation owing to the absence of clinical evidence of the same, was found to be present. Recovery.

(2) Specimen consisting of bone measuring 1½

x1 inch, removed from the abdomen, and resting on the peritoneum posterior to the linea alba of a girl suffering from an umbilical hernia, and supposed to be a portion of the right pelvic bone. Discussed by Dr. Schaffer.

Dr. Freeman exhibited a kidney showing **polycystic degeneration**, the whole kidney being converted into a mass of cysts. The disease was bilateral, the other being less affected, and the liver was also involved. Discussed by Drs. Beggs, Powers and Freeman.

Dr. Childs exhibited **skiagraphs** of two cases, each showing a renal calculus. One had been operated, and the calculus which weighed 1 1-4 grains was found in the exact locality indicated by the x-ray. The calculus was also exhibited.

The President, Dr. Hill, exhibited photo-micrographs; (1) round celled lipoma; (2) scirrhus epithelium; (3) adeno fibro-myoma; (4) genito-urinary epithelium; (5) vesical cells; (6) renal tubal cells; (7) urethral and seminal cells; (8) vaginal cells; (9) prostrate cells.

Dr. Stover exhibited **skiagrams** of, (1) crushed lumbar vertebrae. (2) Series of illuminated skiagrams of (a) tumor of kidneys, (b) stone in kidney, (c) tuberculosis of hip joint in a boy, (d) giant celled sarcoma of small finger of right hand, (e) osteo-myelitis of tibia. (3) Specimen of "liquid sun-shine" or fluoresceine, which is an analine product. The dose is grt x in solution given about ten minutes before the x-ray exposure is made.

Dr. Beggs exhibited **specimens from both lungs** of a male dying from pyo-pneumothorax, the case during life presenting some unusual features.

Dr. Powers reported a case of **appendicitis** with free fluid in the peritoneal cavity, the intestines matted together and the cecum and appendix located under the liver just outside the gall bladder, both pointing upward. Discussed by Drs. Freeman, McNaught, Rogers, Childs and Powers.

Dr. Whitney reported a case of complete **transposition of the viscera** in a child.

Dr. Black reported the use of the giant magnet for the removal of a **foreign body in the eye**, extraction being accomplished in 15 minutes. Dr. Black called attention to the fact that considerable time might be required by the magnet in which to accomplish its object.

Dr. Beggs reported a case of **chicken-pox** closely simulating small pox, the eruption ap-

pearing on the plantar surfaces of the hands and feet, and umbilication occurring. 2. A case of **pulmonary tuberculosis**, the lesion being apparently slight at first, suddenly becoming very active and the patient dying in one week.

Dr. Whitney reported a case of **pneumonia** in a male who was cyanotic in the early stage. Venesection was done, eight ounces of blood removed with improvement in the condition. Later 1 1-2 ounces of pus were removed from the right side, with healing in a few days. The temperature, however, remained elevated, and a second pocket of pus was found in the left side, which being evacuated, the temperature dropped to the normal point, the cavity healed quickly, and complete recovery followed. Dr. Whitney thought the case a good illustration of the rapidity of recovery in this class of cases. 2. A case of pneumonia in extremis, which was bled without benefit, death following. Dr. Whitney was of the opinion that venesection was only of benefit in the early stage of the disease.

Dr. Hall reported a case of **pleural effusion** from which 80 ounces were removed, but which did not present dyspnoea, or any clinical signs of the trouble before aspiration. 2. Woman with **enlarged heart** secondary to a kidney lesion of long standing, the heart occupying a midaxillary position. 3. Child with **hereditary syphilis**, discussing in this connection the presence of well marked atheroma. Discussed by Dr. Beggs.

Dr. Hickey discussed the **treatment of syphilis** by hypodermic medication, and reported the case of a woman formerly treated by mercury internally, improving rapidly under the use of salicylate of mercury by the hypodermic. Discussed by Dr. Black who reported that Dr. Hickey's case had improved so much that the eye least affected, now had 5-7 of normal vision; while the other which was very opaque, had 5-40ths normal with small visual field. Discussed by Drs. Edson, Beggs and Hall.

Dr. Waxham reported a case of **tuberculosis** in a woman, native of Colorado, having a tubercular throat who was benefited by residence in Arizona during the winter months of each year. Later an empyema was discovered and drained, following which, general emphysema appeared, and death resulted. 2. Case of **empyema** opened, with prompt relief following.

Dr. Edson discussed the measuring of the **blood pressure** with Cook's modification of the

Riva-Rocci sphygmomanometer, and reported the case of a woman with an extremely high blood pressure of over 350 m. m. Venesection was done, sixteen ounces of blood being drawn, the arterial tension being reduced 50 m. m. Dr. Edson advised the use of a wide arm band, and an allowance of 20 m.m. less than the reading in fat people, on account of the excess of adipose tissue.

Dr. Wetherill reported two cases of vesico-vaginal fistula, in one case resulting in almost complete atresia of the vagina. Both operated with recovery.

F. W. KENNEY, Secretary.

BOOKS.

Clinical Diagnosis and Urinalysis. A Manual for Students and Practitioners, by James Ray Arneill, A.B., M.D.; illustrated with 79 engravings and 1 colored plate. Medical Epitome Series. Lea Brothers & Co.

The editor in his preface refers to the difficulties of the task which he and the authors of this series have undertaken, in that each volume must present a "combination of brevity, clearness and comprehensiveness;" must "authoritatively cover its respective subjects in all essentials," and must give the "maximum amount of information, in letter press and engravings, for a minimum price." The individual numbers of the series thus far published have certainly conformed to this standard, and the present volume is no exception to the rule. The author in his preface disclaims any attempt at originality or completeness, and says that the volume is intended to serve the needs of physicians and students rather than those of experts. Its compactness and small size make it a convenient book of reference. The illustrations are very good; some of them are original.

The different chapters comprise equipment and scope of laboratory work, the technic of blood work, the physiology and pathology of the blood, apparatus, reagents and technic of stomach work, and examination of feces, sputum and urine. The chapters devoted to the anemias and to animal parasites, both of the blood and the feces, are especially good.

Several convenient minor "tricks" in blood and sputum examinations, and in urinalysis will be found of value in lessening labor without lessening the value of the results obtained.

MARY HAWES.

Manual of Psychiatry. By J. R. De Fursac, M.D. Authorized Translation by A. J. Ros-

anoff, M.D. Edited by Joseph Collins, M.D. New York City. Large 12mo. 364 pages. Cloth, \$2.50. New York. John Wiley & Sons, 1905.

The general practitioner, both on account of his opportunities for contact with patients and on account of the confidence and intimate knowledge that belong with family practice, usually has the first opportunity to recognize commencing mental disease, and can exert great influence in the treatment of such cases. To meet the responsibilities which his position entails, some general knowledge of psychiatry is necessary. Then there must often arise questions of diagnosis between the delirium of acute disease and more serious mental disturbances. This manual gives a general survey of the subject such as will prove most serviceable to those who have not devoted especial attention to mental disease.

The International Medical Annual: A Year Book of Treatment and Practitioner's Index by Various Contributors. E. B. Treat & Company, New York. 1905.

Treat's Medical Annual appears this year as a large octavo of 650 pages. Among its thirty-five contributors are some who stand at the head of their respective lines of work. The general plan of arrangement includes a general review of therapeutics, followed by what is called a dictionary of remedies, the articles alphabetically arranged by the names of the drugs discussed. It is followed by a general review of medicine and surgery and a dictionary of treatment in which the alphabetical arrangement is concerned with the names of the diseases. This is followed by some account of sanitary science, a list of the more important books of the year, and a general index. A notable feature of the present volume is a collection of stereograms illustrating the diseases of the eye and of the nasal accessory sinuses.

Conservative Gynecology and Electro-Therapeutics. A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. By G. Betton Massey, M.D. Philadelphia. Fourth Edition. Revised, Rewritten and Greatly Enlarged. Illustrated with 12 original Chromo-lithographic Plates; 12 Half-tone Plates, and 157 Half-tone and Photo-Engravings in the Text. 8vo. 484 pages. \$4.00 net. F. A. Davis Company, Publishers, Philadelphia.

Electro-Therapeutics has been a noli-me-tangere in medical schools and to some extent in medical societies and medical journals. In the

practice of the neurologists, and the X-ray men, it is considered a legitimate and valuable adjunct to the armamentarium. But it is frowned upon by the majority of gynecologists, and the men who employ it are apt to be looked at askance as if under the suspicion of quackery. This ought not to be the case. The action of electricity upon unstriped muscle fibre is so well attested that it seems absurd to neglect its use in the one organ that contains an appreciable amount of this tissue.

There should be at least one specialist in every large city to whom could be referred gynecological cases suitable for electric treatment. The expense of an adequate equipment and the time required for intelligent treatments are so great as to limit its feasibility in the hands of the general practitioner or even of the gynecologist. Dr. Massey is such a specialist. His book, therefore, is of the greatest value, not alone to men who seek to enter such a specialty, but to the general practitioner who is alive to all methods of treatment, even if he is without the means of himself carrying them out.

M. H.

International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by O. O. J. Kelly, A.M., M.D. Philadelphia, U. S. A. Fifteenth Series, 1905, Philadelphia and London, J. B. Lippincott Co.

This volume comprises articles on Treatment, Medicine, Surgery, Neurology and Obstetrics, and reviews of the progress of medicine during 1904 along the lines of treatment of Infectious Diseases, Constitutional Diseases, Diseases of the Blood and Ductless Glands, Diseases of the Circulatory System, Diseases of the Kidneys, of the Respiratory Tract, of the Digestive Tract, of the Nervous System, Medicine and Surgery. All of the articles are well worth reading. In the Section on Medicine, three articles on cardiac subjects are especially valuable. In that upon Surgery a new operative

method for the total expiration of the larynx is given. In that upon Neurology, Charles K. Mills, M.D., writes upon Morphiomania and other forms of Narcomania and some of their legal consequences.

M. H.

Malformations of the Genital Organs of Woman. By Charles Debrierre, Professor of Anatomy in the Medical Faculty at Lille. With 85 illustrations. Translated by J. Henry C. Simes, M.D. Philadelphia, P. Blakiston's Son & Co. 1905. Cloth, 182 pages. \$1.50 net.

This small book presents nothing that is not usually touched upon in gynecological textbooks. Its merit lies in its systematic arrangement. It is marred by some unnecessary quotations from non-medical French writers.

NEWS ITEMS.

Recent Graduates.—The Denver and Gross Medical College Commencement held May 18th. The degree of Doctor of Medicine was conferred upon 31 members of the class of 1905.

At the annual commencement of the University of Colorado, at Boulder, June 7, the class graduating from the Medical Department numbered six.

The Denver Homeopathic Medical College at its commencement, April 27th, turned out a class of six.

The State Board of Charities and Corrections includes among its present members Dr. Eleanor Lawney and Dr. D. H. Duggan.

DEATHS.

Dr. Gilbert E. McKeeby, a graduate of Bellevue Hospital Medical College, of the class of 1868, died at his residence at Pueblo April 24th. He was a member of the Colorado State Medical Society, through the Mesa County Society.

Dr. I. S. Weyand, a graduate of the University of Pennsylvania in the class of 1866, died in Denver, April 20th. He had not been engaged in the practice of medicine since removing to Colorado.

Dr. Floyd A. Whiting, a graduate of the Pulte Medical College of Cincinnati in 1871, died at Telluride, April 16th. He was a member of the Colorado State Medical Society through the San Miguel County Society.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month. .G. H. Cattermole, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Bilsborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, September and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, September and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month.....
Teller County, fourth Tuesday in each month.....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

American Medical Association

Next meeting at Portland, Oregon, July 11-14, 1905.

President:

John H. Musser, Philadelphia, Pa.

President-Elect:

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Geo. H. Simmons, 103 Dearborn Ave., Chicago, Ill.

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K. A. J. McKenzie, Portland, Ore.

State Medical Societies

Place and Date of Meeting with Name and Address of Secretary.

Arizona Medical Association, Prescott, June 1-2, 1905..J. W. Foss, Phoenix
California, Medical Society of State of, Riverside, April 18-20, 1905
.....P. M. Jones, San Francisco, Y. M. C. A. Bldg.
Idaho State Medical Society, Boise, Oct. 5-6.....E. E. Maxey, Boise
Indian Territory Medical Association, Tulsa, June 20-22.....
.....R. J. Crabill, McAlester
Kansas Medical Society, Wichita, May, 1905....C. S. Huffman, Columbus
Montana State Medical Association, Butte, May 17-18.....
.....G. W. Cahoon, Butte
Nebraska State Medical Association, Beatrice, May 2, 3, 4.....
.....A. D. Wilkinson, Lincoln
Nevada Medical Association, Reno, May 9-10.....J. L. Robinson, Reno
New Mexico Medical Society, Las Vegas, May 10.....
.....G. H. Fitzgerald, Albuquerque
Oklahoma State Medical Association, Guthrie, July 10, 11.....
.....E. O. Barker, Guthrie
Oregon State Medical Association.....L. H. Hamilton, Portland
Texas State Medical Association, Houston, April 25-28, 1905.....
.....I. C. Chase, Fort Worth
Utah State Medical Association, Salt Lake City, May 9-10.....
.....W. S. Ellerbeck, Salt Lake City
Washington State Medical Association, Tacoma, Sept..A. H. Coe, Spokane
Wyoming State Medical Society, Cheyenne, Sept. 27-28.....
.....G. L. Strader, Cheyenne

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And its Constituent Societies.*

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Press of J. B. Stott & Company, 1839 Champa Street, Denver

Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

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1909—J. T. Melvin, Saguache; W. W. Reed, Boulder.

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1906—P. F. Gildea, Colorado Springs.

Alternates:

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Committee on Arrangements:

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LEADING ARTICLES

BRANCHES OF THE AMERICAN MEDICAL ASSOCIATION.

One of the important subjects coming before the meeting of the American Medical Association at Portland is that of a scheme for the formation of branches of the Association, already referred to in *COLORADO MEDICINE*, August, 1904. For a good many years Inter-State Medical Associations have been springing up in widely separated portions of the United States, especially in those regions which were rather thinly populated and in which the State Medical Societies have not been very well supported. None of these Inter-State Associations has risen to a place of very high importance among professional organizations. But so far as the writer is aware no such organization has been abandoned; and in some sections their meetings have proven more attractive and more important than the meetings of the State Medical Societies.

The question is fairly raised, cannot some kind of inter-state organization be made a help and support to the State Medical Societies instead of being permitted to distract from the latter and weaken them? It is not a question of bringing organizations of this kind into existence. They already exist and to all appearances will continue to exist, and to command the support of a considerable number of active workers in the profession.

From the beginning, the A. M. A. has met from year to year in different parts of the country, so that its meetings might stimulate interest in its subordinate local organizations. Repeated proposals have been made to change this, and have it meet

even once in two or three years in some one city, as at Washington, D. C.; but it still adheres to its original custom. The most striking increases in local memberships have been connected with these comings of the A. M. A. into one region after another. Now, however, the national body has grown so large that comparatively few cities can offer good facilities for its entertainment. The majority of State Medical Societies must abandon any hope of welcoming it as a guest, and benefiting by the stimulus its presence would bring. If they are ever to have the benefit of this kind of stimulus they must get it through something like branches of the A. M. A. Even those State Societies which, like Colorado or California, can hope to have meetings of the national body within their territories can expect its visits only at long intervals.

The establishment of branches of the A. M. A. is, therefore, not a question of the multiplication of medical societies. Organizations of this kind now exist. By giving them a place in the general scheme of organization they can be made more useful. The policy of using their meetings to stimulate interest in local organizations is not a new policy. It is merely a new method of rendering effective, under altered conditions, what has been a leading policy in the A. M. A. since its first organization. For every organization a fundamental condition of life is, that it shall be able to adapt itself to the changes that occur in its environment. The American Medical Association still possesses the vitality that enables it to meet changes that occur in the requirements of the Medical Profession.

One of the strongest claims made for existing inter-state organizations has been, that they could devote themselves wholly to the scientific and social needs of the profession. Branches of the A. M. A. would

be most favorably circumstanced to serve these interests. All questions of membership and ethics would be settled for them. The state medical journals and the Journal of the A. M. A. would doubtless furnish means for the publication of their Transactions. Very little legislation would be necessary. Their necessary expenses could be very light, and met without special machinery to provide funds. Such a branch could arrange itself in a few appropriate sections and present the nearest approach to a purely scientific gathering yet conceived, among our general professional organizations.

EDWARD JACKSON.

NOTE AND COMMENT.

The New Medical Law.—The new State Board of Medical Examiners meets this month to formulate the necessary rules, and put into complete operation the new State Medical Law. It is a significant fact that the only important opposition to the signing of the law by the Governor came from the representatives of the newspapers, and was frankly based on the ground that it would injure the State by lessening their receipts from the patronage of advertising quacks. In one of the newspapers the law is spoken of as "a so-called medical bill that will cause \$150,000 a year to be sent to advertising specialists outside of the state of Colorado." In other words the people of Colorado will be compelled to go outside of the State in order to be fleeced in this particular manner. This may be true. But with their present gambling facilities, fake mining schemes and promoters generally, they will probably be able to part with their money fast enough; and the public health will be all the better for it.

Tuberculosis is a subject of such importance in the practice of Colorado physicians that we do not need to offer apologies for devoting so much space to it, both in our last number and in the present issue. More than that, it is a subject about which Colorado physicians can teach a great deal that

their colleagues in other parts of the country need to learn. Considering the importance of "the great white plague," it receives far too little intelligent consideration in medical teaching and medical literature throughout the United States. We venture the assertion there is no other large class of cases that receive such complete neglect, or such inadequate attention, as cases presenting the early stages of tuberculosis.

Tuberculin Treatment.—Dr. Arneill's leading article in COLORADO MEDICINE for May, 1904, and the elaborate paper of Dr. Baird in the present number, fairly raise the question whether the tuberculin treatment of consumption has had a fair trial. It will be remembered that Koch's announcement regarding tuberculin, at the Berlin International Medical Congress, was made prematurely, to add importance to that gathering. It was upon that premature announcement, upon partial knowledge and incomplete laboratory work, that the popular vogue of the treatment was founded and a supposed test made of it. It should be no matter for surprise if we discovered that the present general rejection of all therapeutic use of tuberculin was as premature, and as ill-founded as the popular acclaim that greeted that announcement.

Journal of the New Mexico Medical Association. Since the establishment of COLORADO MEDICINE we have had inquiries about the journal almost every month from the officials of other State Medical Societies that were considering the establishment of similar journals. Several of these have already been established. The latest is that of the New Mexico Medical Association, the first number of which bears the date of June 15. It is a 32-page quarterly, containing the annual address of the President and four of the original papers read before the last meeting of the Association. There are also news items, personal notes, notes of county societies, etc., that add to the interest, for the members, for whom it is primarily intended. Its

advertising pages are ethically clean. It belongs to the new order of medical journals, the journals which are sustained by the medical profession, and not by the patronage of the manufacturers of proprietary medicines.

ORIGINAL PAPERS

*KOCH'S TUBERCULIN.**

By WM. J. BAIRD, *Boulder.*

To Robert Koch is due the introduction of remedies that directly influence tuberculous processes in animal tissues. After prolonged experimentation with remedies that checked the growth of tubercle bacilli in culture media, but failed to modify the clinical history of tuberculosis in animals, he found one that not only controlled the growth of tubercle bacilli in test tubes but in the animal body as well. It was a glycerine extract of tubercle bacilli. This he named "Tuberculin" (1), and later, to distinguish it from newer but related products, "Old Tuberculin."

Given by the mouth tuberculin was inert; but given subcutaneously to animals (guinea pigs) they soon became immune to tuberculosis—inoculation with living bacilli; and guinea pigs in advanced tuberculosis were rescued from death. Given to healthy men in doses of .25 gram it was followed by a general reaction, characterized by chills, fever, headache, pains in the joints and back, nausea and vomiting, depression, restlessness and labored respiration. Given to tuberculous men in doses of 0.1 gram it was followed by general and local reaction, lesion at point of injection and tuberculous foci. The general reaction began within four or five hours and was accompanied by chills, fever (39° - 41° C), nausea, vomiting, headache, pain in back and joints, depression, loss of appetite, and general lassitude lasting twelve to twenty-four hours. Locally at the point of injection, there were redness, swelling, heat and

pain lasting twenty-four to forty-eight hours and disappearing (aseptic injection) without suppuration. The local reaction in tuberculous tissues was best seen in lupus. Even before the onset of the general reaction the lupus tissue was seen to be swollen and red, the redness deepening to a reddish brown. After the temperature returned to normal the redness and swelling disappeared within two to three days, the lupus area was soon covered by crusts (dried serum) that fell off within two or three weeks, leaving a smooth red scar. This local reaction was limited to the diseased tissues, but extended over the entire area involved.

Similar but less marked signs were seen in gland, bone and joint tuberculosis, and similar processes in tuberculous lung tissue were inferred. These symptoms following the subcutaneous administration of tuberculin to tuberculous animals led Koch to attach great importance to it as a means of diagnosis, but most of all he valued it as a therapeutic agent. After disappearance of the redness and swelling the lupus tissue did not return to its former condition, but in greater or less extent disappeared, usually only, however, after repeated doses. It was given in doses of .01 gram repeated every one or two weeks until the reaction no longer appeared. Recent mild cases of lupus, bone, gland and joint tuberculosis were cured within a short time, and graver cases showed gradual improvement. (König) (2.)

Tuberculin came at once into unprecedented favor, but clinicians failed to heed Koch's directions; that only patients without fever should take tuberculin and that the dose should not be increased until it was borne without marked reaction. Instead it often happened that when a given dose was followed by fever, even to 39° or 40° C, the succeeding dose was larger under the impression that if only the dose were made large enough the temperature would be controlled. This irrational and unwarranted use of the remedy was soon followed by reports of the most alarming

*Read before the Boulder County Medical Society, June 1, 1905.

nature. Patients rapidly grew worse; all symptoms became more grave; there was great loss of strength and weight; tuberculous meningitis and acute hemorrhagic nephritis complicated the clinical picture, and even death followed within seven days from the beginning of treatment. This soon led to an almost universal discontinuance and condemnation of tuberculin in diagnosis and therapeutics. But a few workers, notably Petruschky and Goetsch, persevered with the remedy, carefully selecting their cases and keeping the dosage well under control, with results that have done much toward restoring tuberculin to favor.

Diagnosis.—To-day as never before we recognize the importance of diagnosing pulmonary tuberculosis during its incipency, during the so-called first stage. How nearly impossible it is to do this with the microscope is shown by recent sanitarium statistics. During the first stage of pulmonary tuberculosis, Turban failed to find bacilli in the sputum in 60 per cent of his cases; Weichert, 77%; Pickert, 54.3%; Freymuth, 70%. (3) So important in relation to treatment and consequent prognosis is this frequent absence of bacilli from the sputum during the earlier weeks and even months of the disease, that a recent writer has entitled a paper on the subject, "The Dangers of the Microscope in the Early Diagnosis of Pulmonary Tuberculosis." (4) Often, too, during this stage physical signs are absent, and if present may not be sufficiently well marked to enable one to feel warranted in formulating a diagnosis. It is in this stage of the disease that tuberculin may be of priceless value. In the diagnostic use of tuberculin Koch excluded all cases with temperature above 37° C. Some recent workers, notably Petruschky (5) would accept all cases with temperatures not above 37.2° in axilla, 37.5° mouth, 37.8° by rectal measurement, provided the general physical condition warranted.

The patient is instructed to make a temperature record (two hour periods) for

several days; and if it is found that at no time within the twenty-four hours was the temperature above 37° (mouth), Koch or 37.5° , Petruschky, he receives subcutaneously (preferably in the forenoon) .0001 gram of old tuberculin, and is told to continue the temperature records as before. If the temperature rises even $1/4^{\circ}$ the dose is not increased, but repeated the third day, and if the repetition of the dose of .0001 gram is followed by a rise in temperature, higher than after the first administration, the diagnosis may be regarded as established.

Koch regards a rise in temperature on the repetition of a given dose above that of the initial administration as pathognomonic. If there is no rise in temperature the dose is increased to .0005; .002; .005; .01. Beyond 1 centigram I believe it is not wise to go. There are reports of reaction to tuberculin with subsequent exclusion of tuberculosis by autopsy. But in many of these cases the dose was above 10 milligrams; in some as high as forty-five milligrams. Between doses there should be not less than one, preferably two free days.

The symptoms of a well-defined reaction are given by Petruschky as:

1. Heat, swelling, redness, pain at point of injection, coming on in six to twelve hours, disappearing within one to two days, according to dose, and always without suppuration (aseptic injection).

2. Rise in temperature within six to twenty-four hours from a few tenths to several degrees according to dose and susceptibility of patient, to gradually return to normal within one to two days. If it continues above normal beyond say three days, the rise is not due to tuberculin but to intercurrent infection.

3. Visible tuberculous foci, as lupus, joint and gland tuberculosis show within 6 to 48 hours active hyperemia. If the reaction is strong, inflammatory changes, followed by partial necrosis.

4. General reaction, indicated by headache, depression, loss of appetite, if the

reaction is marked, if slight, mild fever without general disturbance. "The occurrence of these symptoms after an injection of a dose of old tuberculin under ten milligrams is positive proof of the existence of a tuberculous focus in the body of the subject." (Petruschky).

If the symptoms are not well marked repeat after several days the same dose or one slightly increased. I believe it is important to begin with a very small dose, say 1/10 milligram, because some will react to hypodermics of water (suggestion). Kohler and Behr (6) gave sham tuberculin injections (water) to forty people, and of this number ten reacted as shown by headache, lassitude and slight rise in temperature. Nine out of ten reacted to simple puncture by hypodermic needle. The 1/10 milligram doses serve as a control and enable one to exclude reactions from suggestion—repetitions of injection of same dose.

The following case from my own practice during the preparation of this paper may prove helpful:

———, aged 27, resident of Colorado since 1897, until January 1905, had never been sick. Father died of tuberculosis twenty-three years ago. January, 1905, severe attack of influenza, tardy recovery, weight did not return to normal, cough, subfebrile temperatures in the afternoon, no sputum, clearly defined physical signs absent, temperature as follows:

	8 A.M.	Noon	5 P.M.	8 P.M.
May 23	37.2°	36.8°	37.1°	37.3°
" 24	37.3°	37.3°	37.5°	37.6°
" 25	37.1°	37°	36.8°	37°
" 26 3 p.m. T. 0.1 Mg.	36.6°	36.7°	37.1°	37.2°
" 27	37°	37°	37.3°	37°
" 28 10 a.m. T. 0.5 Mg.	37°	36.5°	37.4°	37.2°
" 29	36.8°	36.9°	36.8°	36.9°
" 30 10 a.m. T. 2 Mg.	36.8°	37.3°	37°	37.7°
" 31	37.2°	37.5°	37.3°	37.4°
June 1 8 a.m. T. 5 Mg.	37°	37.7°	38.6°	38.5°
" 2	37.8°	38.1°	38.1°	38°
" 3	36.8°	36.6°	37.1°	37.1°

May 30th at 8 p. m., temperature was 37.7°, but as the patient was a trifle nervous I felt it wise to give an additional and

larger dose on June 1st, but in view of slight headache and evening temperature of 37.7°; May 30th, I now believe it would have been better to have repeated the dose of two milligrams on June 1st. Following five milligrams, headache, nausea, restlessness, constriction throughout the chest, temperature 38.6° and moist rales at the left apex (local reaction). Diagnosis: Incipient pulmonary tuberculosis.

Among others the following recommend the use of tuberculin for diagnostic purposes and advise beginning with small doses. Petruschky (7), Koch (8), Spengler (9), Moeller and Kayserling (10), Adler (11), Grasset and Vedal (12), Latham (13), Mazette (14), Schluter (15), Grünwald (16), Bandelier (17), Fraenkel (18), Rumpf (19), Schrader (20), Freymuth (21), Hammer (22), Piekert (23), Turban (24). "For the early diagnosis of pulmonary tuberculosis, old tuberculin remains the best means."—Robert Koch.

Therapeutics.—To the late Goetsch of Slawentzitz (25) more than to all other workers combined is due the present status of tuberculin in the treatment of tuberculosis. In 1891 he treated successfully nine cases; but from 1891-95 the universal fear of tuberculin prevented others from applying for treatment. In 1895 upon the recommendation of patients treated in 1891, others presented themselves for treatment; and from that date the number constantly increased until in 1900, 110 cases were under treatment. From the first Goetsch recognized the importance of avoiding marked general reactions and of excluding from treatment all patients with fever.

He insisted upon three rules as fundamental and absolute if one is to have success in the use of tuberculin. 1. No patient with fever should receive tuberculin in any dose. If the temperature can not be reduced by rest in bed, wet packs, etc., the case is not suitable for tuberculin treatment. 2. A given dose must never be increased until it is borne without reaction. 3. For about forty hours after each injection the patient must remain in

bed. The injections were usually made in the afternoons and the patient remained in bed until the morning of the third day. The beginning dose was usually .00001 gram and if this was followed by reaction he gave next .00001, and if this caused a reaction he gave new tuberculin in similar or larger dose and continued to doses of 1 centigram, when he returned to old tuberculin. In no case was he able to attain immunity with new tuberculin. If a dose caused reaction it was repeated and if reaction was marked the dose was reduced. The dose was increased until one gram was borne without reaction, when the patient was discharged as cured; but with instructions to report once or twice a year for examination or the tuberculin test.

His patients gained in weight, tubercle bacilli disappeared from the sputum, physical signs and cough disappeared, and in every way they seemed fully restored to health. The total number having received treatment for more than four weeks was 175, and of this number 125 were reported cured, equal to 71%. The remaining 50 for various reasons failed to complete the treatment and were classed as improved.

Since the publication of Goetsch's paper in 1901 many workers have confirmed his results; and so far as my own experience goes, I can bear enthusiastic testimony to the value of old tuberculin as a remedy for tuberculosis. The duration of treatment varies from three months in mild cases, to two years in grave cases, bone and joint tuberculosis.

Petruschky's method varies somewhat from that of Goetsch, and by many is considered a more rational method of procedure. The most distinctive feature of his method is treatment in what one might call broken periods. The injections are given very much after the manner of the Goetsch method, until a dose of .01 gram is reached, when treatment is discontinued and after three months the patient is subjected to the tuberculin test; if the result is a positive reaction the treatment is repeated, and after three months the patient

is again tested, and so on until he no longer reacts to 20 milligrams of old tuberculin, but the cure is not pronounced complete until the patient does not react to test nine months after the last treatment. He reports: open tuberculosis 38 cases, cured 15, equal 40%; closed tuberculosis, 54 cases, cured 54, equal 100%.

"I hope that within a reasonable time physicians will convince themselves that tuberculin will do all that can be reasonably expected of a specific for tuberculosis."—Petruschky.

Holdheim (26) reports 15 cases treated in private practice, all seemingly cured. After two years all were free from physical signs of tuberculosis and none reacted to the tuberculin test.

Spengler reports the following cases: 1. Miliary tuberculosis cavity formation in both upper lobes, treated by tuberculin. Petruschky's method, cured. Later death from abscess of the brain; autopsy showed tuberculous lesions completely healed; no bacilli in tissues. Case II. Extensive tuberculosis of both lungs, cavities in upper lobe of left lung, cured. He believes that tuberculosis is curable by tuberculin so long as the loss of tissue is not so great that the remaining healthy tissue is not equal to meeting the demands of the body in action—vital processes.

In tuberculosis of the eye the results of tuberculin treatment have been very good. A. v. Hippel (28) treated 23 cases of tuberculosis of the iris, ciliary body and cornea, one of the sclera, 3 of the conjunctiva. After excluding 13 cases (cured) in which it was not possible to say positively that the cure was due to tuberculin, there remained 14 that received tuberculin only and were cured. The cure was begun with a dose of 1/500 milligram of new tuberculin, repeating on alternate days ("every other day"), increasing each dose by 1/500 until the dose reached 1/50 milligram, then 1/50 milligram increase to 10/50 milligram, then 4/50—5/50 milligram—provided the temperature remained normal; if it rose above 38 degrees

he repeated the given dose until it failed to cause a reaction. He did not find it necessary to increase the dose beyond one milligram. It is very important to begin with small doses and continue six months or more until all tubercles have disappeared as well as swelling and vascularizations, precipitates on the posterior surface of the cornea and clouding of the lens. Cases that had lost vision were fully restored to sight.

"In view of these results I consider it proven that in new tuberculin we possess a remedy that properly used will cure the gravest cases of tuberculosis of the eye with restoration of vision. For this reason I believe that such eyes should not be enucleated as has been the custom, but that they should be saved by tuberculin. This is especially important when we remember that the small doses of tuberculin are absolutely safe, whereas in many cases meningitis and death have followed enucleation." Some of von Hippel's cures were of more than 9 years' standing. H. Handman (29) reports two cases of tuberculosis of the iris cured; Jacoby (30) one case; Schoeler (31) 48 cases: choroiditis 14, iritis serosa 9, scleritis 4, keratitis parenchymatosa 6, miscellaneous 15; all cured.

In no other country has tuberculin found such wide favor as in Belgium, where Denys' tuberculin is used instead of Koch's. Denys' (32) is made by filtration instead of submitting to heat, and it is claimed that it is less likely to cause reactions. Belgium workers claim that their results with Denys' tuberculin are even better than those of Goetsch, and Petruschky with Koch's. One worker reports 600 cures, three of severe laryngeal tuberculosis.

There are in this paper several references to new tuberculin. It is made by rubbing tubercle bacilli in a mortar, suspending in distilled water and centrifuging. The upper layer from the first centrifuging Koch named "Tuberculin T. O.;" the remainder "Tuberculin T. R." This is centrifuged several times.

Dangers.—Perhaps the following cases may show the importance of care in the administration of tuberculin. Smith (33). Case I. Leper, tuberculosis suspect, temperature not above 37 degrees. Old tuberculin 0.5 milligram; temperature 37.4°. No subjective reaction. Four days later old tuberculin, one milligram; 36 hours later temperature 38.1°, depression, headache, restlessness, subfebrile temperature lasting ten days. Upon return of temperature to normal repetition of former dose of 1 milligram followed by nausea, restlessness, great depression, temperature 39.5°. Fever continued, going up to 39 degrees in the afternoon until death six months later. The second dose of one milligram should not have been given.

Case II. Pulmonary Tuberculosis. Old tuberculin one milligram, rise in temperature of 0.4°. Four days later 5 milligrams followed by temperature of 40.3°. Recovery within one week. Four weeks later second dose of 5 milligrams, temperature 40.6°. Death within 24 hours. These deaths occurred in the Hamburg Eppendorf General Hospital and were due to a careless use of tuberculin.

Case III. Kurrer (34). Twenty years old, strong man. Slight infiltration of the left lower lobe. Evening before the first injection temperature 37 degrees, morning of injection 37.4°. No other temperatures taken. First injection .0004 milligram of new tuberculin intravenously; next day temperature 39.3°; third day feeling well, temperature not taken. Second dose of .0004 milligram new tuberculin intravenously, that evening temperature 38.5°. Second evening rising temperature, coma, general convulsions, death. I believe that this death, too, was due to ignorance of tuberculin administration according to Koch's directions.

Note.—The usual therapeutic dose increase (Goetsch) is, say: .0001, .00015, .0002, .0003, .0004, .0005, .0006, .0007, .0008, .001, .002, .003, and so on to one gram; not less than two whole days between doses.

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It is not claimed that this list is exhaustive.

A CASE OF ADDISON'S DISEASE WITHOUT PIGMENTATION.

J. N. HALL, M.D., Denver.

A case of this nature recently reported by Dr. Whitney, and through his courtesy, seen by me at the Denver City and County Hospital, leads me to give a synopsis of a similar one.

A male, Italian, married, miner by occupation, 33 years of age, was admitted to my service in St. Anthony's Hospital on February 4th, 1901. He had been in good health until attacked by influenza, three weeks before. Following this trouble he complained of increasing weakness, this being the one prominent symptom upon which he laid stress. The appetite was poor and the bowels constipated. There was no complaint of pain. The temperature was subnormal, the pulse rapid and feeble. The heart sounds were clear, but sonnded far away. The physical examination was otherwise negative, and the urine presented nothing of interest. The skin was normal in color.

Shortly after admission he began to hiccough, and this continued for forty-eight hours until death, with temporary intermission under the administration of morphine and Hoffman's anodyne.

Increasing dyspnea, marked cyanosis, nausea and occasional vomiting and rapidly failing pulse were noted. Just before death there was found a marked tenderness of the erector spinae muscles, which contracted forcibly upon slight pressure.

Dr. S. D. Hopkins saw the case with me, and we made a diagnosis of vagus neuritis, presumably from the influenza.

The post-mortem showed a marked neuritis of the right vagus, but obviously from the pressure upon the nerve of a large tuberculous bronchial gland. No lesions were found in the lungs. The supra renal capsules were considerably enlarged and pre-

sented extensive tuberculosis infiltration with areas of caseous degeneration. Nothing else of especial interest was recorded.

It is of interest to note in this case the recognized coincidence of lack of pigmentation and great acuteness of the disease. The acute forms in general are believed to have been long latent, as the pathological findings would suggest to have been the case here, and are thought to be brought to the surface by some depressing agency. The influenza doubtless operated as such in this instance.

In the absence of pigmentation the diagnosis is commonly overlooked. This is rather because of the rarity of the disease than from lack of diagnostic data. In our own case, the intense prostration, the rapid and feeble pulse, the nausea and vomiting, the persistent hiccup and rapidly approaching death seem to have furnished sufficient grounds for at least an intelligent suspicion of Addison's disease. Certain of these symptoms, however, in this case, were doubtless due to a compression neuritis of the vagus; and considering this complication, it is doubtful if the full diagnosis was possible during life.

COUNTY MEDICAL SOCIETIES.

The Boulder County Medical Society held its regular monthly meeting at the Court House in Boulder, Thursday, June 1. The members present were: Drs. O. M. Gilbert, President; Reed, Giffin, Lindsay, Parker, Packard, Wood, Queal, Trovillion, Campbell and Cattermole.

The censors reported that Drs. Herr and Dillingham had not registered in the county; they were requested to register so that they may be elected to membership at the next regular meeting. Dr. W. A. Packard was made a member of the society.

Dr. W. J. Baird read the paper of the evening, upon *Koch's Tuberculin*. See page 179.

Dr. Baird's paper was freely discussed. Dr. Gilbert confirmed the absence of tubercle bacilli in the sputum of one patient whom Dr. Baird had been treating with tuberculin. He also said that examination showed great improvement in the physical signs. Dr. Cattermole had found tubercle bacilli in the sputum of a patient last

October, but failed to find them now, after five months of treatment, by Dr. Baird, although the physical signs had not changed in this patient.

Dr. Baird mentioned one case where he had used the tuberculin with an apparent cure; the patient has shown no reaction to tuberculin during the past two years.

Dr. Baird mentioned an instance where he had established the diagnosis of tuberculosis in a person who had contracted the disease in Colorado. It was the opinion of those present that not many cases of tuberculosis originated in this locality, although there was great abundance of infectious sputum scattered about. Attention was called to the teachings of some prominent medical men who believe that tuberculosis is never acquired, but always transmitted from parent to child, and may or may not become active.

Dr. Parker reported the case of a neurotic woman, who suffered with **pain in the rectum and abdomen**. Examination showed a thickened condition of the rectal mucous membrane, but this was not considered malignant. The patient was much relieved by heat and massage.

Dr. Cattermole reported a case of **fecal impaction**. A very hard mass filled the rectum; this was broken up by means of a douche curette, with the patient under chloroform.

Dr. Lindsay reported a case of **prolapsed and retroverted uterus**. The woman had been advised to undergo operation for the cure of the trouble, but declined operation. A pessary was introduced and worn for two years, during which time the woman had passed the menopause; the uterus had atrophied and the organ was in good position.

Dr. Gilbert reported the case of a coal miner, aged 37, who had typhoid fever about one year ago; after recovery from the fever he took violent exercise in mountain climbing. He was an excessive beer drinker. About a month before death he entered the University Hospital, with a **dilated heart**. This condition continued until death, with the additional symptom of pulmonary congestion. Autopsy showed a very large heart, with dilation of the right side especially. The liver was small and harder than normal; the kidneys were congested, and the lungs showed marked congestion, with hepatized areas in the right.

Dr. Cattermole reported having a similar case now under treatment. He is a saloon keeper;

has been a hard drinker. Has a dilated heart, dyspnea, oedema of ankles, casts and a trace of albumen in the urine. The symptoms, and the condition of the heart, have improved under the use of digitalis and strychnia.

The society adjourned to meet again the first Thursday in July.

GEO. H. CATTERMOLLE.

Denver.—At the regular meeting of the Medical Society of the City and County of Denver, held April 18, Dr. E. C. Hill read a paper entitled:

Rational Diet in Disease.

He referred to the danger and frequency of auto-intoxication. In a large proportion of well nourished persons something of the kind was their ordinary state. There was great need to individualize in dietetics. This was strikingly the case in the treatment of dyspepsia. In this direction the appetite of the individual could render most valuable assistance. Milk had the greatest range of service of all foods. The objections to it could generally be overcome by increasing the quantity or mixing with other foods. Milk lacks iron, which may be supplied by other articles of diet. Cream and butter may largely supplant cod liver oil. Fresh buttermilk was almost an ideal diet for elderly people. Eggs were very rich in fat; they were contraindicated in flatulent dyspepsia. Among meats the red meats were not worse than the white. They were indicated in anemia and chlorosis. The manner of their preparation had much to do with their fitness for sick people. With cold storage poultry there was always danger of ptomaine poisoning. Fresh fish were most digestible, but with canned fish there was danger of ptomaine, also. The animal oils or fats were more digestible than the vegetable oils. Diabetes was best controlled by a diet rich in fats. The cereals were the chief foods of the race. The various dextrinized package foods were recommended. Green vegetables, although innutritious, were rich in iron. Fruits were of value as appetizers. Nuts were very rich in oil but hard to digest on account of the cellulose they contain.

Dr. J. E. Kinney said that all that made up the daily habits of the individual influenced digestion and assimilation. He emphasized the need to individualize in applying the principle of dietetics to treatment. Digestive troubles marked by lack of motility require rest before as well as after meals. Forced feeding in tu-

bercular disease may do harm. Diet might be more potent than medicine.

Dr. J. N. Hall said that patients continually ask, "Which is more digestible?" as if that were the important matter. If one wished to become an invalid he should start out to save his stomach in every possible way. The stomach adapts itself to what is required of it. The easy things to digest were not the most nourishing nor the best for the healthy individual.

Dr. F. G. Byles called attention to the importance of not giving beef tea or broth in disease of the kidneys following scarlet fever and diphtheria.

Dr. W. J. Rothwell found that in the dietetic treatment of weak heart many mistakes were made. It was often recommended to drink freely of buttermilk. This introduced a large quantity of fluid into the circulation which the heart was compelled to move. A dry diet was better.

Dr. J. R. Arneill said we have got to individualize. The dyspeptic physician was apt to think all his patients required about what he did. In hyperchlorhydria one patient does well on a full meat diet, another poorly. He thought there was no reason for the distinction between red and white meats.

Dr. G. F. Libby called attention to the fact that in strumous keratitis and conjunctivitis the disease was often due to bad diet.

Dr. B. Oettinger believed the main thing to keep in mind in speaking to a patient about diet was to avoid extremes. The watchword should be moderation. A mixed diet was to be chosen in all diseases not acute.

Dr. T. E. Carmody in regard to a milk diet had found the citrate of soda preferable to lime water to break up the curds, because it did not constipate.

Dr. L. Liebhardt had noticed that the excessive drinking of water at certain health resorts had a baneful influence in weak heart.

Dr. C. E. Edson thought that lobsters and crabs cause urticaria in certain persons, not because they are scavengers, as has been suggested, since whatever they eat first undergoes thorough elaboration before becoming a part of the animal.

Dr. W. L. Hess reported a case of congenital deformity of the ears. There was great deficiency of the auricles, and an absence of the external auditory canals. In spite of these defects the patient's hearing power was 60 to 70 per cent of normal.

Dr. Cresson reported 3 cases of general **eruption following acute grippe** or other illnesses accompanied with evidences of rheumatism, which ended in rapid recovery under large doses of salicylates. The skin lesion appeared to be a deep papule attended with itching. It did not weep unless irritated by scratching. He believed it was due to products of faulty metabolism which were being excreted by the skin.

Dr. T. E. Carmody had seen a very similar case, which under anti-rheumatic treatment had cleared up in 7 or 8 days.

Larimer County Medical Society.—Regular meeting held in the City Hall June 7. Present: Drs. Hoel, Killgore, Upson, Gilbert and Stuver. Each member was invited to report a case.

Dr. Upson reported a case of **pneumonia** during the latter part of pregnancy. The second day of the disease labor set in and a badly asphyxiated child, which was resuscitated with difficulty, was born, but lived only a short time. The child appeared to be suffering with pneumonia at the time of its birth. This raised the question whether the disease had been communicated by the mother to the foetus in utero. The mother also died.

Dr. Stuver reported a case of **confinement occurring during a severe attack of facial erysipelas**. Both mother and child got along nicely.

Dr. Hoel discussed some cases of **peculiar syphilitic manifestations**. All present took an active part in the discussion of the various cases presented.

E. STUVER.

Secretary.

The Otero County Medical Society held a very interesting meeting at the Court-house, La Junta, Tuesday morning.

The following members were present: Drs. Finney, Kearns, A. L. Stubbs, Jessie Stubbs, Hall, Donlon, Moore, all of La Junta; Drs. Kearby, Pollock, Shelton, Lawson and Sigman of Rock Ford, and Moody of Fowler.

Applications for membership were received from Drs. C. M. Bradley and B. E. Moody, of Rocky Ford, and W. W. Reed, of La Junta.

Visitors present: Drs. Bradley and Moody, of Rocky Ford.

The papers presented were:

Conjunctivitis—Dr. E. M. Marbourg, Pueblo.

Preventive Medicine and Surgery—Dr. R. W. Corwin, Pueblo.

The papers were briefly discussed by Drs. Finney and Haskins.

The society extended to Drs. Corwin and Marbourg a vote of thanks for their kindness in attending the meeting and complimented them on the papers read.

Society adjourned to meet at La Junta in September.

E. GARD EDWARDS.

Secretary.

BOOKS.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D. Vol. II. June, 1905. Octavo, 346 pages, 48 illustrations. Per annum, cloth \$9.00; paper, \$6.00. Lea Brothers & Co., Philadelphia and New York.

This volume contains the articles on Hernia, by W. B. Coley; Surgery of the Abdomen, by E. M. Foote; Gynecology, by J. G. Clark; Diseases of the Blood, Spleen, Thyroid and Lymphatics, Diabetes, Scurvy and Exophthalmic Goitre, by Stengel; and Ophthalmology, by Jackson. The sections devoted to Hernia in Children, Surgery of the Stomach, Appendicitis, Uterine Cancer and Myoma, and the Anemias are of general interest and importance. Nor can such subjects as Methyl Alcohol and Hemorrhage in the Eyes of the New Born lack interest for the general practitioner. *Progressive Medicine* sustains the high rank it has won in a class of publications that are absolutely essential to the physician who wishes to keep well posted in the recent advances of his science and art.

Drink Restriction (Thirst Cures) Particularly in Obesity, by Prof. Carl von Noorden and Dr. Hugo Saloman. Authorized Translation Edited by Boardman Reed, Philadelphia. 8vo. 86 pages. Cloth, 75 cents. New York: E. B. Treat & Co., 1905.

This monograph is one of a series of clinical treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition, by Prof. von Noorden of Frankfurt. It presents clearly and moderately the effects of drink restriction, and the chief indications for a resort to it, especially for obesity and threatened cardiac insufficiency.

Tumors of the Cerebellum. By Charles K. Mills, C. H. Frazier, G. E. de Schweinitz, T. H. Weisenburg and Edward Lodholtz. 12mo. 180 pages, illustrated. New York: A. R. Elliott Publishing Co. 1905.

This is a series of papers reprinted from the New York Medical Journal and the Philadelphia Medical Journal. The Diagnosis of Cere-

bellar Tumors is discussed by Mills; the Surgical Aspects by Frazier; Ocular Symptoms by de Schweinitz, and the Pathology by Weisenburg. Lodholtz gives a summary of the present knowledge of the functions of the cerebellum. The last two papers are accompanied by bibliographies. The work constitutes a valuable monograph upon a necessarily obscure condition.

Transactions of the American Academy of Ophthalmology and Oto-Laryngology. 1904. 8vo. 350 pages. Published by the Society.

This volume contains the transactions of the Denver meeting. It is well illustrated with half tones and engravings and a colored plate of the frontispiece.

Transactions of the College of Physicians of Philadelphia. 8vo. 350 pages. Printed for the College.

This volume contains some 18 papers read before the college last year, but it does not contain the papers and discussions thereon, read during the year, before the four sections of the college. This organization, with its 118 years of work, its magnificent library and its discussions of medical interest, is one of the most important medical institutions of America.

Diseases of the Eye and Ear. By A. N. Alling, M.D., New Haven, Conn., and O. A. Griffin, M.D., Ann Arbor, Michigan. 12mo, 263 pages, 83 illustrations. Medical Epitome Series. Cloth, \$1.00 net. Lea Brothers & Co., Philadelphia and New York.

This little manual briefly but clearly touches upon the principal points in the causation, recognition and treatment of diseases of the eye and ear. It should be a real help to the student in getting a general and well-classified knowledge of these subjects. To ascertain if he has attained this he will find the questions appended at the back of each chapter a sufficient test.

The general practitioner will find this book handy for ready reference; but it will hardly

enable him to treat these diseases with the discrimination and full attention to details required. The wood-cuts help interpret the text.

G. F. L.

The Urine and Feces. A Practical Manual on the Urine and Feces in Diagnosis. By Otto Hensel, Ph.G., M.D., and Richard Weil, A.M., M.D., with Smith Ely Jelliffe, M. D., Ph.D. Octavo, 334 pages with 116 engravings and 10 colored plates. Cloth, \$2.75. Lea Brothers & Company, New York and Philadelphia, 1905.

The book devotes 156 pages to urinalysis, and the remainder to examination of feces. The latter part is especially valuable, presenting several features that have not before been collected into one concise working manual.

M. H.

NEWS ITEMS.

New Doctors.—Drs. Jack Brown, W. W. Reed and C. H. Farthing, Class '05, Marion-Sims-Beaumont, have located at La Junta.

Drs. C. M. Bradley and B. E. Moody have opened offices at Rocky Ford. The latter will practice specialty only, eye, ear, nose and throat.

Drs. Miller and Call of Greeley, who have been doing special work in Chicago, have again resumed their routine work.

Dr. Wood of Greeley, with Mrs. Wood, left on June 20th for Portland, going via the Yellowstone Park. The doctor is the sole representative of the Weld County Society attending the Portland session.

Dr. Pogue has recently returned from the East, where he was in attendance on the Tubercular Congress at Washington. He reports that they have nothing new to teach us along these lines. A general campaign to educate the people, however, must be conducted.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month..G. H. Cattermole, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Bilsborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, Septem-
ber and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, Septem-
ber and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July
and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month.....
Teller County, fourth Tuesday in each month....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

LEST WE FORGET.

This is to remind every member of a constituent society that the Colorado State Medical Society will meet this year in Colorado Springs on October 3, 4 and 5.

There are no invitations issued, for you are a part of the "main show" yourself and need no invitation. I would remind you, however, that we can't issue a program until we get the title of **your** paper, which should be sent in before September 1st.

Your co-operation will help to make this coming meeting the most interesting one in the history of the society.

Dr. Solly, the old war horse, can be depended on to furnish typical Colorado Springs weather, while Dr. Neeper, chairman of the committee on entertainment, is a gentleman of immense proportions, with a heart big enough to fill his body and gray matter enough to keep every one busy during the interval between scientific sessions.

If you miss this meeting you'll regret it. Come and bring a good paper with you, and don't go home till the sessions are closed.

Remember the date, October 3, 4 and 5.

J. M. BLAINE, Secretary.



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Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

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1907—J. N. Hall, Denver; Hubert Work, Pueblo.

1908—C. F. Gardiner, Colorado Springs; S. D. Hopkins, Denver.

1909—J. T. Melvin, Saguache; W. W. Reed, Boulder.

Delegates to American Medical Association:

Term Expires: Delegates:

1905—W. A. Jayne, Denver.

1906—P. F. Gildea, Colorado Springs.

Alternates:

C. K. Fleming, Denver.

H. A. Black, Pueblo.

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LEADING ARTICLES

THE AMERICAN MEDICAL ASSOCIATION.

The Portland meeting will be especially remembered for the opportunity it gave to become acquainted with the Great Northwest; its excursion on the Columbia river, its trips by sea to San Francisco, upon Puget Sound, and to Alaska. It has been customary to speak of such "junketing" with sarcasm or contempt. But it is very likely that the opportunities thus afforded for personal acquaintance and informal discussion among those who have the interests of the Association most at heart, will have more influence in shaping the future of the American Medical Association than what was said and done in its formal meetings. Even outside of the business of the Association, the companionships rendered possible by a six weeks trip from New York to Portland and back, or the two weeks trip to Alaska, are of the highest value in developing the *esprit de corps*, which has always been, and always will be, a fundamental need of the medical profession.

Arrangements for the Meeting.—Lack of experience and acquaintance with the needs of the American Medical Association has often been strikingly evident in the arrangements made for its reception. The best intentions and devoted sacrifice of time and money cannot make up for such deficiencies. This was painfully evident at Portland, where it was attempted to hold the general meetings in one part of the hall while the exhibit was held in another part of the same room, shut off by only thin muslin curtains. Before the general session had continued twenty minutes,

the President was instructing the Chairman of the Committee of Arrangements to procure a different place of meeting. The First Presbyterian church was secured and served the purpose admirably, but the change of place from that announced in the printed programs must have seriously interfered with the attendance upon subsequent sessions. This, and a similar misarrangement for the House of Delegates probably led the latter body to adopt an amendment to the By-laws giving the Board of Trustees full control of arrangements for the annual sessions, and in future the arrangements will doubtless fully accord with the needs of the Association, as demonstrated by past experience.

An amendment to the Constitution, laid over for action at the next meeting, will, if adopted, give the Trustees power to change the place of meeting if they find that the Association cannot be properly cared for at the place selected, or satisfactory transportation rates cannot be secured. It has been evident for several years that the plan of selecting a place of meeting and then attempting to get rates from the railroad companies, placed the Association at a great disadvantage, so that members of the A. M. A. have visited the city at which its meeting was to be held, not at the time of that meeting, but at some other date when better rates had been granted on behalf of some other organization, whose dealings with the railroad had been conducted more shrewdly.

The provision for the Sections was probably the best that could have been made in Portland. Most of them met in one large school house, while a few that convened in a building three blocks away were admirably accommodated.

The Council on Pharmacy, as already organized by the Board of Trustees, re-

ceived the formal approval of the House of Delegates as "the most effective and important measure ever undertaken by this Association to rid the profession of the abuse of the nostrum evil." The Trustees were also recommended to make its organization permanent and request the co-operation of the Bureau of Chemistry of the Department of Agriculture, and to provide for publication in book form of the preparations not in the pharmacopœia which may be approved by the Council. Other strong resolutions bearing upon this matter received the approval of the House of Delegates, one stating that "it is reprehensible for members of this organization to prescribe or use nostrums," another requesting the Trustees "to insert in the Journal with each advertisement the formulas of remedies which may have been passed on favorably by the Council."

A National Medical Directory.—At the Atlantic City meeting the Trustees were authorized to publish a blue book of the members of the Association. Their study of the subject convinced them that this would not fully meet the needs of the profession and was liable to arouse antagonism. They, therefore, recommended the publication of a directory which should include the names of all licentiates, with brief data in regard to them, the names of members being indicated by the form of type. In spite of a protest coming from the state of Michigan, the House of Delegates approved this proposition and fully authorized the Trustees to carry it forward. The labor of preparing a good directory of this sort is necessarily enormous, and considerable time must elapse before the work can be placed in the hands of the profession. But it will be a relief to have one that is not padded with advertisements, many of which are so unethical that they would be rejected even by a medical journal. The directory that has for several years been published in New York shows what excellent work in this direction can be done by a representative medical society.

Miscellaneous Business.—Among the matters claiming the attention of the five sessions of the House of Delegates were the final report of the Rush Monument Committee, the report on the International Medical Congress to be held next April in Lisbon, and the support of the war on nostrums now being waged in the Ladies' Home Journal, Collier's, Everybody's Magazine and some other popular publications.

The Council on Medical Education recommended as preliminary to the study of medicine a high school education, to be tested by the public school authorities and not by the faculty of the medical school; and four years in a medical college giving at least a seven months' course. These recommendations were adopted by the House of Delegates, with the additional suggestion that the student also be given a course on business methods, and one on medical ethics and the value of medical organization.

The Committee on National Incorporation reported the bill which had failed of passage at the recent short session of Congress, and, upon their recommendation, the matter was placed in the hands of the standing committee on National Legislation.

The Committee on Scientific Exhibits introduced this year historical exhibits relating to the life of Dr. W. T. G. Morton, the discoverer of surgical anesthesia, and of Dr. J. S. Bobbs, who was the first to perform cholecystotomy. The latter exhibit included the patient on whom the first operation was performed. The Committee promised that next year similar exhibits will be made illustrating the lives of Drs. N. S. Davis and Ephraim McDowell.

New Officers and Place of Meeting.—As had been expected, since the invitation to go there was given last year, Boston was selected as the place of meeting in 1906. The exact date is to be fixed later. The officers chosen included: President, Dr. Wm. J. Mayo, of Rochester, Minn.; First

Vice-President, Surgeon-General Walter Wyman of Washington; Second Vice-President, Dr. K. A. J. McKenzie, Portland; Third Vice-President, Dr. E. S. Talbot of Chicago, and Fourth Vice-President, Dr. F. D. Martin of New Orleans.

To deliver the orations the following were selected: Medicine, Dr. J. B. Shattuck of Boston; Surgery, Dr. J. D. Bryant of New York; State Medicine, Dr. W. H. Sanders of Montgomery, Ala.—Ed.

SECTION MEETINGS.

Section on Medicine.—The work of the Medical Section of the American Medical Association was especially gratifying to those who feared a small attendance because of the distant position of Portland.

An admirable program had been arranged, including discussions of ambie dysentery and hook worm disease by those with especial experience upon these subjects.

The comparative brevity of the program for each session left ample room for discussion, which was much above the average.

Dr. R. C. Cabot proved to be a model presiding officer for the section, and gave universal satisfaction. The quarters provided were at first too noisy, and adjournment was taken to the Atkinson school house, opposite. The chief fault here was the lack of room. At almost every session from twenty to one hundred physicians stood during much of the time for lack of sufficient sitting room. This point should be more carefully watched in future. The quarters for the medical section at Boston should have a seating capacity of at least six hundred to a thousand, in order to avoid possible overcrowding.

We commend the tendency to proper regulation of the length of the program in the Association in recent years and the vastly higher character of the papers, and notably of the discussions.

The new chairman, Dr. H. C. Moffitt of San Francisco, read an excellent paper upon "Thyroid Diseases Upon the Pacific

Coast." Fortunately, Dr. Moffitt has a wide acquaintance with the profession in Boston and a personal knowledge of the local conditions, so that we may look forward to a well-arranged and well-managed meeting of the Medical Section for 1906.

J. N. H.

Section on Ophthalmology.—It was the comment of some who had attended both meetings this year, that this section had again surpassed its old rival, the American Ophthalmological Society, in the extent and value of its scientific work. The attendance upon its sessions illustrated the steady interest of those who sustain it. The presence of Professor Hirschberg added much to the value of the meeting. He took part in many of its discussions, always adding something of value, and never occupying the whole of his allotted five minutes. It ought not to be uncommon, but we fear it is, for a man who is being somewhat lionized, not to assume that his hearers would rather listen to him indefinitely than to any one else. To preserve a proper sense of proportion under such circumstances seems to be difficult. But Prof. Hirschberg did it; and this doubtless added to the hearty good will with which he was nominated and elected an honorary member of the American Medical Association. While the ophthalmological papers and discussions presented at this meeting were none of them epoch making, they did each bring out one or more valuable points appropriate for the occasion. They were almost uniformly of high value. E. J.

NOTE AND COMMENT.

Colorado State Medical Society.—The meeting of the Colorado State Medical Society to be held this year at Colorado Springs, Oct. 3, 4 and 5, promises to be in every way a successful one. The number of papers given place on the program may not be so large as in some former years, but this can be more than compensated for by better discussions. The call of the Secre-

tary is again printed on the last page, and every one who desires to read a paper before that meeting should make sure that the title will be received by the Secretary before September first. The full program will appear in the next number of COLORADO MEDICINE.

British Medical Association—At the recent meeting of the British Medical Association, held at Leicester July 26-29, it was decided to hold the meeting next year at Toronto, Canada. The exact date has not been fixed, neither has the exact date for the Boston meeting of the American Medical Association. It is to be hoped that those who are charged with determining the dates for these two great medical gatherings will so arrange them that it will be easy for American physicians and surgeons to attend both meetings. Probably the experience of those who attended the Montreal meeting of the British Medical Association in 1897 will lead a still larger number of its members to cross the Atlantic for the Toronto meeting.

ORIGINAL PAPERS

ARTERIO-SCLEROSIS ENDING IN CARDIAC INSUFFICIENCY AND ACUTE GLOSSO-LABIO- LARYNGEAL PARALYSIS.

By MARY HAWES, M.D., Denver.

Mrs. H., 81, widow; comes of a long-lived family; has had two daughters, both living and well, and twelve grandchildren, all living and well; has always lived a protected life, free from hard work, her husband having been a minister; has an agreeable, cheerful disposition; has always had good health and has never had a serious illness; has been a total abstainer from alcoholic drinks, and has taken the least possible amount of medicine; is tall and slender; has been in Iowa and Colorado for fifty years, in good circumstances.

I was called to see the patient for the first time about six months before her fatal illness. She was suffering at that time from an acute dyspeptic diarrhea due to over-indulgence in strawberries. Physical examination of all the organs, except those belonging to the circulatory system, was negative. The urine was of normal color, amount, and specific gravity, free from albumen, sugar or casts.

The area of heart dulness was increased to the left and downward, the apex being slightly below the fifth interspace and about half an inch to the left of the nipple line. The heart sounds were clear; the second aortic sound was accentuated. There was evidently present a simple hypertrophy of the heart.

Arterio-sclerosis was present in the radials, ulnars, axillaries, femorals, facials and temporals. The course of the radial could be felt to the bend of the elbow; it was not markedly tortuous, however. The axillary could be felt plainly. The facials, where they crossed the angle of the jaw, were decidedly hard. The pulse was regular, about 76, full, and of high tension. The case was one of senile arterio-sclerosis.

I was called to see her the second time on December 19th, 1902. On that date, an hour after the evening meal, which had included stewed canned tomatoes and raw onions, while sitting at rest in an easy chair, the patient had a fainting spell. When I arrived, about ten minutes afterward, she had recovered consciousness and was vomiting undigested food; this vomiting ceased after the stomach was emptied. Temperature was 97.8. The heart's impulse was visible, but wavy and feeble, and was felt over a wide area. A point of maximum intensity could not be found. There was a loud, blowing, systolic murmur at the apex; it was of a musical character, was transmitted to the axilla, and heard at the angle of the left scapula. Both aortic and pulmonary second sounds were accentuated. The dullness was increased transversely; there was no thrill to be felt. The cervical veins were full, and showed

a wavy impulse. The pulse was small, irregular, of lower tension than formerly, and about 90 in frequency. The urine was dark amber, 1020 in specific gravity and free from albumen, sugar and casts.

There was no motor paralysis, no disturbances of sensation, and the speech was unaffected.

Consciousness was perfect, except that there was no memory of the fainting spell or of events just succeeding it.

The condition was thought to be a sudden disturbance of compensation, due to gastric irritation, resulting from the unusual articles of diet, tomatoes and raw onions. It changed very gradually for the worse, feet and hands becoming oedematous; but it was not until Feb. 9th, over seven weeks from the date of the fainting spell, that there was any decided event to chronicle.

The pulse became regular, but varied from time to time in tension and strength. The heart murmur also varied in intensity, but other heart conditions remained about the same.

On Feb. 9th, about 4 P. M., the patient had what was described as "some sort of a spell." There was partial loss of consciousness, vomiting followed, and marked restlessness set in. Pulse became very irregular, feeble and rapid. When seen at 7 P. M., three hours after this attack, physical examination was as follows: Temperature 99°F.; area of heart dulness unchanged; heart sounds clear: *no* murmur; pulse feeble, irregular, missing sometimes one beat in three, about 130; distal phalanges purple, nails very dark; feet more swollen than they had been; swelling not great, however, and extending only a little above the ankles; consciousness present, shown by a smile of recognition and by nodded answers to questions; no paralysis of extremities; no disturbances of sensations in body or extremities; reflexes normal; mouth wide open and lips slightly movable; patient could not completely close them, however; tongue could not be protruded, was motionless, looked small and

anemic, was not coated; swallowing was difficult but not impossible; mouth dry with no saliva being excreted; eyelids movable; pupils moderately contracted, reactive to both light and accommodation; eyeballs movable and not deviated. Lungs negative. Respirations about 32, of a modified Cheyne-Stokes type. Inspirations moderately loud and through the mouth.

Urine had not been voided all day. Patient would not or could not use the bedpan and the bladder was distended, so she was catheterized. About 24 ounces of a dark urine of strong odor was obtained. This was free from albumen and sugar.

Patient became still more restless, drawing up her knees, moving from one side of the bed to the other; throwing her arms above her head, and ejaculating what sounded like the word "well," explosively uttered with the lips wide apart and tongue motionless. This restlessness continued until about noon the next day, growing gradually less, the ejaculated word becoming more and more indistinct. During the night a marked swelling of the left parotid developed.

Examination the next morning showed motionless tongue, almost motionless lips, anarthria, and complete inability to swallow.

All wrinkles below the eye on the left side of the face were effaced. Mouth was wide open and lips were drawn to right side. A side to side, irregular, spasmodic motion of the lower jaw was present and continued for about six hours. The swollen parotid did not seem painful and showed no sign of inflammation, nor of cystic retention of saliva. The mouth was dry, with no saliva present as before.

The left eye-lids were kept spasmodically squeezed together. Pupils reacted to light and were equal and moderately contracted. There was no deviation of the eyes. This tonic spasm of the orbicularis extended to the right eye after about twelve hours.

The lungs were negative. Respirations

were less rapid, more regular, through the mouth. Inspiratory stridor was present. The heart murmur was present again, loud and blowing as before. It continued the same until just before death. The pulse became less irregular, stronger, less rapid. The cervical veins were distended. The temperature was 98.2°F. The pulse became quite regular after 24 hours (about 90), and remained so until just before death.

Bladder was catheterized at regular intervals, no change in the analysis of the urine occurring. No incontinence of the urine occurred until just before death. No central paralysis developed except the primary condition in lower jaw, tongue, pharynx and larynx. The effacement of the wrinkles on the lower part of the left side of the face was thought to be due to involvement of and pressure upon branches of the facial in their course through the swollen parotid.

About 36 hours before death, the parotid on the right side began to show some swelling; to a slighter degree than that on the left side.

A conjunctivitis developed, first on the left, then on the right side, a serous discharge being present.

The tonic spasm of the orbicularis palpebrarum continued until about 12 hours before death. Consciousness was retained until about the same time. This was shown by resistance to catheterization, and by voluntary resisting movements of the hands and feet, especially when enemata, to which the patient had always strongly objected, were given. Partly because of this resistance, it being thought that such a struggle, if prolonged, might end in sudden death, and partly because the family objected, rectal alimentation was not tried. The only food the patient received, therefore, was the very small amount absorbed through the skin from frequent olive oil inunctions. Death came gradually with a slow failure of pulse and respiration.

Summary: The initial "stroke" occurred about 4 P. M. on Monday, Febru-

ary 9th. Death occurred at 7:30 P. M. Saturday, Feb. 14th, no food nor drink having been swallowed since the morning after the stroke.

The existence of arterio-sclerosis; of dilation of the heart with resulting mitral insufficiency; the onset with temporary failure of circulation; the persistence of consciousness; the beginning of the paralysis in the tongue; its extension to the muscles of deglutition and phonation; the limitation of the paralysis to the tongue, pharynx and larynx; with the gradual failure of strength, as from starvation, were thought to justify the diagnosis of acute glosso-labio-laryngeal paralysis caused by a minute thrombosis in a small branch of the left vertebral.

I can find no record of such a complication as the swelling of the parotid in the limited literature to which I have had access. Was it a trophic lesion dependent upon involvement of the glosso-pharyngeal? Or was it due to catheterization (it developed immediately afterward)?

The case is interesting as illustrating what seemingly trivial events are able to turn the scale toward a fatal termination. An arterio-sclerosis with no causative factor except age; as a result, an hypertrophy of the heart with probably sclerotic coronary arteries; an attack of indigestion instrumental in overthrowing compensation; a further weakening of the already weakened circulation; a minute thrombosis; and death from starvation.

The site of the thrombosis is interesting likewise. The hypoglossal nuclei lie close together in the floor of the fourth ventricle, being separated from each other about 1 mm. Each nucleus is a column of cells, 2 mm. in breadth and about 15 mm. in length. Dorso-lateral to them, at a distance of about 2 mm. lie the longer columns of the combined nuclei of the glossopharyngeal, the vagus, and the accessory or bulbar part of the spinal accessory. At the level of the uppermost end of the hypoglossal column begins the column of cells which might give rise to the pars interne-

dia of the seventh. Both hypoglossal nuclei are usually involved in an acute glosso-labio-laryngeal paralysis, while only those parts of the glosso-pharyngeal, vagus, and spinal accessory which lie on the level of the hypoglossal columns are affected. In this case, a small part of the nucleus of the seventh was also affected. The whole spot of softening was probably not more than 9 mm. broad by 16 mm. long. Or, expressed more familiarly, $9/25$ or about $1/3$ of an inch broad by $16/25$ or less than $4/5$ of an inch long.

THE CARLSBAD "KUR."

By C. K. FLEMING, M.D., Denver.

Carlsbad, Emperor Charles IV's bath, the world renowned watering place, is a charming little Bohemian city situated in the northwestern part of the Hungaro-Austrian Empire, in the beautiful valley of the river Tepl, at an altitude of 1,247 feet. It has a normal population of about 16,000, though during the "season," April to October, some 55,000 patients from all parts of the globe take the "kur." It is interesting to note, according to the published "kurliste," that the Americans comprise 2,500 of this number; also that there are fifteen here from Denver.

It has a temperate climate and sudden changes are frequent with alternating sunshine and shower. It rains very easily at Carlsbad. Every visitor making a longer stay than eight days, whether taking the cure or not, must pay the local tax. This amounts per person to 20 kronen, or \$4, for the cure tax, and 10 kronen, or \$2, for the music tax. The cure tax is remitted to physicians, and they are also given free bath tickets.

Carlsbad is the best known and most important spa having thermal mineral springs. These are seventeen in number, all located in the heart of the city on either side of the river Tepl. Their chemical composition is practically the same, the

solids consisting of soda sulphate, soda carbonate and soda chloride, with traces of the salts of potash, calcium, magnesia, lithia, etc. The daily flow of water, the temperature or the specific gravity do not change; but the temperature of the different springs has a wide range, varying from 97.8° F. to 163.6° F. The water is transparent and colorless, has a warm, salty taste, and on the whole is a very agreeable drink. It does not produce the nausea usually expected from imbibing warm water. Contrary to the common notion, it is not cathartic and is only slightly aperient in large quantities.

The Carlsbad cure consists of a distinct regime, regulated of course to each case, observance of which is most important, and must be carried on in detail to obtain the desired result. Some one has briefly put it, "Carlsbad water plus Carlsbad rule will alleviate most cases" (indicated cases), "but Carlsbad water minus restraint is nil." The restraint is not arduous, as common sense reigns at Carlsbad, and life here is particularly quiet and restful, in fact it is the "simple life."

The regime may be divided as follows:

1. Hygienic and dietetic regulation.
2. Water drinking.
3. Bathing.

In this brief paper it will be impossible to go into minute detail, yet I shall try and mention some of the important points.

1. The old axiom, "early to bed and early to rise," is practiced religiously. Patients are advised to drink their prescribed waters during the concert hours, from 6 to 8 A. M. One hour after partaking the water they are permitted to partake of a light breakfast, consisting of tea or coffee diluted with two-thirds boiled milk, two boiled eggs and two or three Carlsbad rusks. The heavy meal is taken in the middle of the day, consisting of fish, except salmon, such meats as beef, veal, lamb, mutton, venison and chicken without dressing, all meats being grilled or roasted, green vegetables and cooked fruits. In general, starchy foods, sweets, butter, fats,

gravies, salads and pickles, uncooked fruits, condiments, etc., are prohibited. It is advised to have a light supper, consisting of a little boullion or broth, soft boiled eggs, lean, cold boiled ham (which is very superior in Austria), or some other cold meat. Beverages which may be allowed are spring water or the natural mineral table waters (Gresshuebler or Berliner), light wines or Pilsner beer in moderation. Smokers are allowed three or four cigars daily.

Most patients are advised to take a moderate amount of exercise by walking. For this reason the surrounding wooded hills have been converted into veritable parks by the construction of at least sixty miles of perfect walks of easy grade, from which magnificent views of the surrounding country may be had. During the morning hours these walks are covered with people. By 10 P. M. most patients are ready to retire. To permit this, all places of amusement, theatres, concert halls, churches, etc., open at 7 P. M. and close at 9:30 P. M. It will be noticed that everything conducive to the success of the cure has been considered, the patients' interests being made paramount. Even the menus at the various restaurants have been made to conform to the doctor's regulations.

2. Although the waters of the various springs contain the same solid constituents, it has been learned that they act in a different manner upon the same individual, according to the temperature, the amount of carbonic acid present, and the quantity taken. The warmer waters are absorbed more quickly and are more stimulating, and are prescribed accordingly. The waters are drunk in the early morning on an empty stomach in quantities of from two to six tumblersful, according to the case. They are to be taken slowly, an interval of 15 to 30 minutes after each glass. After the last cupful the patient is instructed to walk leisurely for an hour before eating.

3. In most cases some form of bath is prescribed, and can be taken in one of the

following bath houses: Kaiserbad, Curhaus, Neubad and the Sprudal-bad, all of which are complete in their appointments. A variety of baths are given, such as common or sweet water baths, mineral baths, mud or moor baths, vapor baths, douche baths, iron baths and sauerbrunn baths according to circumstances. The best time for the bath is the forenoon, but on account of the great number of patients one cannot always select his or her time. The usual temperature of the mineral water baths is 92°F., for mud baths 98°F., for vapor baths 104° to 118°F. Baths are prescribed not oftener than three times a week, and patients are recommended to rest for an hour or two afterwards.

There are about 15 physicians in Carlsbad, most of whom are honorable practitioners, and they do not hesitate to send patients away in case the waters are not indicated. They do not consider the Carlsbad waters a panacea for all the ills that flesh is heir to.

The following are diseases which can be and are cured at Carlsbad:

1. Diseases of the stomach: chronic gastric catarrh, hyperchlorhydria, cardialgia, gastric ulcer and dilatation.

2. Diseases of the intestines: chronic catarrh ulcers, habitual constipation and hemorrhoids.

3. Diseases of the spleen: chronic hyperemia and hypertrophy.

4. Diseases of the liver and gall bladder, etc.: congestion, fatty liver, early stage of cirrhotic liver, polycholia, catarrhal jaundice and gall stones.

5. Diseases of the kidney and urinary organs: chronic catarrh, vesical and renal calculi, and in post-operative treatment of uric acid diathesis.

6. Diseases of prostate: chronic hyperaemia.

7. Diseases of women: chronic inflammations and results.

8. Diseases of faulty metabolism: gout, general adiposis and diabetes.

9. Diseases of the skin: sclerosis, urticaria, pemphigus, eczema and furuncles.

In concluding the following deductions may be drawn:

1. Carlsbad with its environs offers a delightful retreat for rest and recuperation.

2. Its waters are of great assistance in the palliation and cure of certain diseases.

3. The success of the Carlsbad cure depends, not alone on the waters, but to a very great degree upon a well-established regime.

4. To ensure permanency of benefit, patients must continue to some extent the regime upon returning home.

5. Contrary to the usual rule, the town authorities co-operate fully with the profession to the end that Carlsbad shall be an ideal watering place. The results obtained show the wisdom thereof, and American managers of similar resorts can learn many valuable lessons at Carlsbad.

COUNTY MEDICAL SOCIETIES.

The Boulder County Medical Society held its regular monthly meeting at the Court House in Boulder, Thursday, July 6th. The members present were: Drs. Gilbert, president; Dodge, Miles, Queal, Spencer, Giffin, Rodes, Packard and Cattermole. There were also several guests in attendance.

Dr. Ida S. Herr was made a member of the Society, and Dr. C. K. Knox was recommended for membership.

Dr. Spencer brought up the question as to whether it was advisable for a physician, who was specializing, to make the fact apparent on his window sign. The matter was discussed, but not definitely decided.

Dr. H. O. Dodge gave the address of the evening, his subject being "Active-principle Therapeutics." Dr. Dodge said he had been using the active-principles for twenty years; these are the alkaloids, glucosides and resinoids of drugs. These medicines are usually put up in granules, each granule containing from 1-136 to 1-6 grain of the active principle. The method of administration is to give one or more granules every fifteen minutes until the effect is obtained, then to make the intervals longer. The object of this is to get the therapeutic effect promptly without the danger of the toxic

action of the drug. When these drugs are obtained from a reliable source, they are not inert as many tinctures are apt to be when used.

Dr. Dodge considers this form of therapy especially adapted to the treatment of children. He takes three ounces of water and adds one granule for each year of age, plus one; of this he gives the child a teaspoonful every fifteen or thirty minutes until he gets the desired effect. For example, he uses two granules (1-134 grain each), of aconitine in three ounces of water, for a child of one year, and gives a teaspoonful every 15 to 30 minutes. There is no erythema from this use of aconite.

Two or more remedies can be combined, if desired, as digitalis with aconite when the heart is weak. No new remedies are introduced by this form of therapeutics; they are simply the active principles of the well known drugs.

The granules are a convenient form in which to administer such bitter drugs as quinin and strychnin. These granules are no more expensive than tablets or pills. An advantage in administering these drugs is that you do not have to write prescriptions, which may be used everlastingly by the patient and his neighbors.

Since using this kind of medicine, Dr. Dodge has had better results in reducing temperature and in relieving pain; he believes this success due to the active-principle drugs.

Dr. Queal asked whether there was any difficulty in dissolving these drugs. To which the essayist answered that as a rule they were soluble, pilocarpin probably being the least soluble.

Dr. Dodge stated that the granules were made by the Abbott Company from the drugs manufactured in Germany.

Dr. Giffin said that we had profited by small doses; that he considered this small-dose and active-principle therapy as the coming method of treatment, but he doubted whether we could get the psychic effect on patients who were accustomed to taking large doses of strong-tasting medicine. Dr. Dodge believed that the psychic effect depended more upon the personality of the physician, but he had convinced such patients also by getting the desired results from the drugs, even though the dose seemed small.

Dr. Packard had used the granules with very satisfactory results during the past eight years.

Dr. Dodge has not found it necessary to give morphin hypodermatically for several years, as he can relieve pain by the use of codein, du-

boisin, atropin, and hyoscyamin, in granules.

Dr. Cattermole exhibited a piece of lung from a case of **fibroid phthisis**. The apices of the lungs in this case were as hard as cartilage, there were no tubercle bacilli in the sputum. The day before the patient died, his sputum was almost black, apparently from the presence of the pigment (dust) in the lung-tissue.

He also presented a **section of small intestine**, showing a tear produced by the kick of a horse. There had been almost no evidence of the injury on the skin surface. The patient showed only a moderate degree of pain or shock, until six or eight hours before death, which occurred 48 hours after the injury. Other instances were mentioned where patients had shown only slight symptoms after severe laceration of the abdominal viscera. It was agreed that such cases should be operated upon. Even cases of gunshot-wounding of several coils of intestine often recover after operation.

The question was discussed as to whether **tuberculous fistula** in ano ever heals. The general opinion seemed to be that such patients did not live long enough for the fistula to heal permanently.

Dr. Dodge had examined the urine, in a case of **pernicious anaemia**, which had a specific gravity of 1060, with no sugar present.

On motion, the Society adjourned to meet again the first Thursday in August.

GEO. H. CATTERMOLÉ, Secretary.

Denver.—A stated meeting of the Medical Society of the City and County of Denver was held May 2nd. The scientific business of the meeting consisted of a

Symposium on Gall Stones.

The **Etiology** was discussed by Dr. C. D. Spivak. He stated that catarrhal inflammation of the ducts and gall bladder was necessary for the production of gall stones; in no other way could they be produced. The exciting causes were microbic in nature and origin. The disposing causes were such as produce inflammatory conditions in the passages and stagnation of bile favoring the multiplication of bacteria. It had been proved that mere retention of bile will not produce gall stones without infection. Sedentary habits, with lack of abdominal movements, favor the production. Displacement of abdominal viscera favor inflammatory changes. Foreign bodies not sterile, duodenal catarrh and its causes, excessive eating and drinking, alco-

holic beverages, were disposing causes. Gall stones were often coincident with appendicitis. Restriction in the amount of liquids taken causes thickening of the bile, and long intervals between meals favor its stagnation. Constipation has a similar tendency. Gall stones are found in many cases of malignant disease, and in the insane, especially those affected with melancholia. They are very rare before the age of 20, and increase in frequency with age. They have occurred, however, in new born children. They are more frequent among women, the proportion being given as 3 to 1, or 5 to 1. This is probably not due to sex, but rather to the less active life, tight lacing, the occurrence of tumors, pregnancy, greater liability to constipation, and pelvic inflammations.

The **Pathology and Chemistry** were considered by Dr. P. Hillkowitz. Stones consisting of pure chlosterin were rare. They were of lighter color. Those consisting of lamina cholesterin were more common. Stones consisting of pure bilirubin were very rare. The larger number contained biliverdin and calcium carbonate. The pathology had been referred to in connection with etiology. The inflammation and secretion of cholesterin with obstruction established a vicious circle, a pathologic process that tended to perpetuate itself.

Medical Treatment was the subject assigned to Dr. J. N. Hall, but he thought this consisted chiefly in calling in a good surgeon, except where cardiac disease, or other contraindications to operation existed, or palliative treatment was required. He traced the resemblances in this respect between gall stones and appendicitis. Prolonged medical treatment was not to be advised for a patient strong enough to stand an operation. Diet should be regulated, especially excess, setting up gastrointestinal catarrh, was to be avoided. Massage could be resorted to, to remove stagnation. Saline waters might relieve the catarrh. During a paroxysm morphia hypodermically and chloroform were most reliable. But the most important thing was to make a diagnosis close enough to justify an exploratory operation.

Dr. S. Simon reported a case giving a history of two previous attacks. The patient under the olive oil treatment passed on the third day a considerable quantity of gall-stones. Dr. Hall suggested that these stones had probably caused ulceration and rupture into the intestine.

Dr. L. Freeman dwelt on the similarities of gall stones and appendicitis. Both were due to defective drainage and microorganisms. Both were surgical affections, in connection with which medical treatment had a place. Pain might remain after operation calling for a thorough course of medical treatment. In the majority of cases with no serious changes in the gall bladder, cholecystostomy was the operation to be preferred.

Dr. W. W. Grant pointed out that many people have gall stones without ever suffering from them or being conscious of their presence. It was not uncommon to find them after appendicitis. The same habit of living may influence both affections. Sometimes we cannot operate, but relief can be afforded by stopping high living and the use of alcohol. The administration of sweet oil prevents constipation.

Dr. W. N. Beggs thought that we need not be quite so pessimistic with regard to gall stones. Not every case of gall stones causes trouble. Not every case that causes trouble refuses to yield to medical treatment, and not all that cause great trouble require operation. Quite large stones may pass through the bile passages.

Dr. C. E. Edson thought we should consider not so much the treatment of gall stones, as the treatment of patients who have them. The same severe colic might occur from obstruction due to catarrh. The gall stones were not usually primary, but secondary. After a single mild attack dietetic treatment might be all that was required. Lodgment of a stone in the bile passages called imperatively for operation.

San Luis Valley.—The San Luis Medical Society held its regular semi-annual meeting at Alamosa on Tuesday evening, June 13th, the President, Dr. J. T. Melvin, in the chair. The following program was given:

Pneumonia, Symptoms and Diagnosis, Dr. Hamilton; Abortion of Pneumonia, Dr. Melvin; Treatment, Dr. Biles.

Appendicitis, Symptoms and Diagnosis, Dr. Whedon; Medical Treatment, Dr. Orr; Surgical Treatment, Dr. Pollack.

The papers were freely discussed by all present. Dr. Hamilton, as delegate to the State Society, made a report. The following officers were elected for the coming year:

President, Dr. E. E. Whedon; Vice-President, Dr. C. L. Orr; Secretary, Dr. A. R. Pollack;

Treasurer, Dr. Van Sands; Delegate, Dr. McFadzeon.

The following new members were added: Drs. Rupert and Van Sands of Alamosa, Dr. Russell of Monte Vista, Dr. Martin of Del Norte, and Dr. Davis of Crestone.

The meeting adjourned to meet August 15th at Wagon Wheel Gap, the guests of Dr. Biles of Amethyst.

The members then adjourned to one of the local hotels, where an appetizing lunch was served.

A. R. POLLACK, Secretary.

Weld County.—The regular meeting of Weld County Medical Society was held in Dr. Law's office on Monday evening, the 26th of June, with a good attendance of members and the President, Dr. Mead, in the chair. The routine business being transacted, a number of clinical cases were reported. Dr. Call reported an adult male with a **diseased femur**, with abscess formation; he presented a tubercular history, and Dr. Call had diagnosed it as such. The pus cavity was opened and drained.

Dr. Law reported a case of **cerebro spinal meningitis** in a child 17 months of age, with typical symptoms, and, after nine days, the usual termination.

Dr. Church gave a lucid report of a case of **bronchiectasis** in a young woman, 20 years of age, and well nourished. The case was marked by cough, profuse intermittent foetid expectoration, and the physical signs of pulmonary tuberculosis. The bacilli were absent.

Renal traumatism. Dr. Dyde exhibited a kidney in three pieces, resulting from a horse's kick, in the right lumbar region. The young man lived eight weeks, with a kidney completely severed from all attachments. Abdominal pain, renal colic, and profuse hemorrhage from the bladder marked the course of his illness. Operation exposed a large blood sac, posterior to the peritoneum, full of clots, removing which, resulted in an active arterial hemorrhage. This required gauze packing to control. Autopsy revealed as above.

Dr. Miller, who has recently returned from Chicago, gave the address of the evening, his impressions of medical progress, derived from his observations while in the Windy City. His remarks proved very interesting to his less favored co-freres, embracing many topics of importance. He alluded to the trend away from

pure medicinal measures, the value of a simple open air life, the revival of electro-therapeutics on a scientific base, advanced knowledge of urinalysis, and finally to that topic which is attracting the attention of thoughtful medical men everywhere, **Immunity.**

The hour being late, the discussion was curtailed, the meeting adjourning at 10:30 P. M.

CHARLES B. DYDE, Secretary.

DEATHS.

Dr. Thomas G. Horn, a graduate of the St. Louis Medical College in the class of 1868, and of the Missouri Medical College, class of 1872, died at his home in Colorado Springs, July 14th, at the age of 78 years. He came to Colorado in 1874. In 1877 he was chosen President of the Colorado State Medical Society, and continued his membership through the El Paso Medical Society at the time of his death. He was for eight years a Trustee of the University of Denver, and had occupied other positions of responsibility in the community.

BOOKS.

Acute Contagious Diseases. By William M. Welch, M.D., and Jay F. Schamberg, A.B., M.D., illustrated with 109 engravings and 61 full-page plates. Lea Brothers & Co., Philadelphia and New York. 1905.

This volume is based upon the personal study of over nine thousand cases of smallpox, nine thousand cases of scarlet fever, and ten thousand cases of diphtheria, by men thoroughly equipped in all modern methods of study and clinical observation. The result is probably the most scholarly and valuable treatise upon the acute contagious diseases in the English language. At the present time, when our general immunity from smallpox has led to an increasing opposition to vaccination, born of the inexperience with smallpox, the chapter on vaccination statistics, with the remarkable series of photographs showing the difference between the disease in vaccinated and unprotected persons, is a most effective argument which every physician should have in his possession. More than many hours of argument will be the value of the illustrations shown to any skeptical person. The entire volume shows in this and similar ways an unusual combination of the highest scientific discussion of the disease dealt with, with a keen appreciation of the practical clinical application of the facts presented. If in so excellent a volume any fault can be found, it is in the chapter on scarlet fever, in which there is not to our mind sufficient attention given to the importance and treatment of the endocardial complications. It is a volume which should be upon the study table of every general practitioner. C. E. E.

International Clinics. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia. Vol. II. Fifteenth Series, 1905. Philadelphia and London, J. B. Lippincott Co.

In this volume R. N. Wilson publishes an elaborate article on the Diagnosis of Incipient Thoracic Tuberculosis which, on account of the importance of the subject and the neglect of it by physicians in general, ought to receive careful attention.

D. B. King in an article on The Treatment of Pulmonary Hemorrhage concludes that adrenalin chlorid is contraindicated.

R. T. Edes, of Boston, makes some suggestions regarding the Treatment of Neurasthenia. Roger, of Paris, reports some cases of "Gallopig Typhoid Fever." Terrier, of Paris, describes and advocates the use of Scopolamin as a general anesthetic in surgery, either alone or combined with chloroform, the danger of which it lessens. But it is impossible in this notice to mention all the articles of especial value that are found in this volume of more than 300 pages.

Thirteenth Biennial Report of the Board of Lunacy Commissioners of the Colorado State Insane Asylum.

This report of 48 pages is devoted chiefly to statistics. It shows prudent management and efficient care of the 587 patients treated in this institution. But beyond the relative frequency of various forms and causes of insanity, and the fact that 46 patients were discharged as recovered and 25 improved, there is little of medical interest.

A Practical Treatise on Sexual Disorders in the Male and Female. By Robert W. Taylor, A.M., M.D., New York. New (3rd) edition, enlarged and thoroughly revised. 575 pages with 130 engravings and 16 colored plates. Cloth, \$3.00. Lea Brothers & Co., Philadelphia and New York, 1905.

Taylor's book must be ranked as a special treatise, one essential to the specialist in this line of work, yet its subject is broad enough to meet the needs of those who are not devoting special attention to this class of diseases. Something of the kind should certainly be at the command of every physician engaged in family practice. The demand for a third edition within five years is worth more than any expression of individual opinion, as to the value of this particular work. The principal additions made in the new edition are to the chapters upon Anatomy and Physiology, which now cover about 75 pages, and in four new chapters dealing with conditions of the female genital organs that have heretofore been too frequently neglected as unimportant.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month..G. H. Cattermole, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Billsborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, Septem-
ber and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, Septem-
ber and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July
and OctoberH. C. Lefurgey, Durango
San Luis Valley, next meeting in May.....E. E. Whedon, Monte Vista
San Miguel, third Saturday in each month.....
Teller County, fourth Tuesday in each month....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

LEST WE FORGET.

This is to remind every member of a constituent society that the Colorado State Medical Society will meet this year in Colorado Springs on October 3, 4 and 5.

There are no invitations issued, for you are a part of the "main show" yourself and need no invitation. I would remind you, however, that we can't issue a program until we get the title of *your* paper, which should be sent in before September 1st.

Your co-operation will help to make this coming meeting the most interesting one in the history of the society.

Dr. Solly, the old war horse, can be depended on to furnish typical Colorado Springs weather, while Dr. Neeper, chairman of the committee on entertainment, is a gentleman of immense proportions, with a heart big enough to fill his body and gray matter enough to keep every one busy during the interval between scientific sessions.

If you miss this meeting you'll regret it. Come and bring a good paper with you, and don't go home till the sessions are closed.

Remember the date, October 3, 4 and 5.

J. M. BLAINE, Secretary.

Colorado Medicine

*The Official Organ of the Colorado State Medical Society
And its Constituent Societies.*

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Colorado State Medical Society

The Next Meeting Will Be Held at Colorado Springs,
October 3-4-5, 1905.

OFFICERS.

President:

Frank Finney, La Junta.

Vice-Presidents:

1st, F. H. McNaught, Denver; 2nd, L. M. Giffin, Boulder; 3rd, B. F. Cunningham, Cripple Creek.

Secretary:

J. M. Blaine, Steele Block, Denver.

Treasurer:

W. J. Rothwell, Cooper Block, Denver.

Board of Councillors:

Term Expires:

1905—H. R. Bull, Grand Junction; S. Kahn, Leadville.

1906—P. J. McHugh, Fort Collins; E. J. A. Rogers, Denver.

1907—J. N. Hall, Denver; Hubert Work, Pueblo.

1908—C. F. Gardiner, Colorado Springs; S. D. Hopkins, Denver.

1909—J. T. Melvin, Saguache; W. W. Reed, Boulder.

Delegates to American Medical Association:

Term Expires: Delegates:

1905—W. A. Jayne, Denver.

1906—P. F. Gildea, Colorado Springs.

Alternates:

C. K. Fleming, Denver.

H. A. Black, Pueblo.

COMMITTEES.

Publication Committee:

Term Expires:

1905—Edward Jackson, Denver, Editor.

1906—S. E. Solly, Colorado Springs.

1907—C. E. Edson, Denver.

Committee on Scientific Work:

G. W. Miel, Denver; S. E. Solly, Colorado Springs; J. M. Blaine, Denver.

Committee on Credentials:

J. M. Blaine, Denver; W. T. Little, Canon City; C. K. Fleming, Denver.

Committee on Public Policy and Legislation:

C. H. Catherwood, Denver; S. D. Van Meter, Denver; W. H. Swan, Colorado Springs.

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S. G. Kahn, Leadville; C. A. Powers, Denver; Hubert Work, Pueblo.

Committee on Necrology:

W. W. Reed, Boulder; C. D. Spivak, Denver; H. R. Bull, Grand Junction.

Committee on Arrangements:

Edward R. Neeper, Chairman; C. R. Arnold, D. P. Mayhew, S. E. Solly and W. H. Swan, all of Colorado Springs.

COLORADO MEDICINE

PUBLISHED BY THE COLORADO STATE MEDICAL SOCIETY.

VOL. II.

DENVER, SEPTEMBER, 1905.

No. 9

LEADING ARTICLES

OUR JOURNAL.

As we approach the close of the second year of the existence of this journal it seems not inappropriate to speak briefly of its aims, its opportunities, and its modest achievements. A few matters that seemed to be open questions two years ago may now be regarded as settled. One of these is, that it is better for the Society to publish a journal than an annual volume of "Proceedings." In this, our experience in Colorado has been perfectly in accord with that of other similar societies. During these two years the number of journals of this class has about doubled; and no such journal has been given up. From present indications in two years more most of the state and territorial medical organizations will have their journals. The journal owned, controlled and published by the Medical Society has come to stay. Of the continuance of COLORADO MEDICINE there can be little doubt. Whether it might not be made more valuable and more attractive under different management is quite another question.

Another matter that is probably pretty well settled is that this journal will never depend for its existence upon money received for the disgraceful advertisements that have been the shame of periodical medical literature and of the medical profession in the past. There must necessarily be differences of opinion as to which advertisements are disgraceful, which are of questionable propriety, and which are to be sought as desirable, both on account of the income they bring the journal, and the information they convey the readers. But it is certain that a higher standard of ethics

will be demanded and maintained in the advertising pages of the Medical Society's journal than in the pages of the average journal which is the private financial venture of the individual Doctor, or where the advertising pages are under the control of lay managers whose only interest in the medical profession is to make money out of it.

An achievement of real value that can be credited to our journal is the bringing of the County Medical Societies regularly to the attention of the members through the report of their proceedings. Whatever may be thought of value of this department to abstract science, its value to the societies and their members is incontestable. In this field COLORADO MEDICINE has been exceptionally successful. The journals of the largest state medical societies have failed to get as much matter, or matter of such general scientific interest as has been furnished by the report sent in by the Secretaries of the Colorado County Medical Societies. This is not claiming that these reports are all of equal value, or that the best of them might not be greatly improved. It is only meant that something worth doing has been accomplished in this direction, and that a channel has been provided through which the work of a group of intelligent, earnest workers will be made effective.

The success of an enterprise of this kind, like the success of any other undertaking, depends on intelligent respect for its necessary limitations. One of the most rigid of these is the financial limit. The State Society cannot afford to make much larger appropriations for its journal than it is now doing. The number of members it can hope, in the near future, to add to its present list is necessarily small. There is no large number of possible subscribers whose

interest can be engaged in COLORADO MEDICINE, without neglecting some of the obvious duties it was called into existence to perform. The income from legitimate advertising must always be quite limited, and the bar to prostituting its pages to the service of commercialism and twentieth century quackery, ought to be most rigid of all. With an income of fifteen hundred dollars, to attempt competition in miscellaneous fields with a journal having an income of one hundred and fifty thousand, or even fifteen thousand dollars, is simply to throw away the opportunity that is really ours. The field in which our work must be done is strictly limited. But in that field the opportunity to do the highest quality of work is absolutely free to all of us.

An important aim of this journal must be to make itself the mouthpiece of the largest possible number of members of the Society. In this direction the success thus far attained has not been very flattering. Too many of the members of the State Society look upon COLORADO MEDICINE as a journal that is being run for them, rather than by them. The need for a more active personal interest on the part of a large number of members is great. In the starting of such an enterprise the need to establish a certain definite policy and character for the journal might be urged as the reason for leaving the work to a few. But to reach its best success it must have a broader support. The State Society should each year utilize its opportunity to introduce new material into its Publication Committee; and those entrusted with the immediate supervision of the journal must be ever alert to recognize and interest new talent for its staff of regular contributors.

It is not possible to recognize ability in a man until he does something to exhibit it. But when any member does show himself capable of writing medical papers that are of more than average value, COLORADO MEDICINE must look to him as one of whom it has the right to expect assistance and active support, and to whom it offers a

method of communication with those of his fellows who will recognize most quickly and cordially his rank among the leaders of his profession.

NOTE AND COMMENT.

The Program.—The program for the coming State Society, to be found elsewhere in this issue, tells as much and as little of what will be done at the meeting as such documents generally do. To use it to the best advantage let each member read it carefully through and note the subjects that appear upon it in which he is particularly interested. Then if he will select one or two of these which he feels most competent to discuss, and carefully prepare himself to discuss them, the program will have best served its purpose. Preparation for discussion will always render it more valuable. The speaker need not be confined to what he has prepared beforehand. His most valuable contributions to the discussion may arise to his mind at the time, suggested by the utterances of speakers preceding him. But such important thoughts will be much more likely to arise—what he has to say will be more likely to have value—because of his preparatory thought upon the subject.

Why Not Have Abstracts printed in the program? This is coming more and more into vogue among scientific societies. The principal difficulty about preparing for a discussion is to know exactly what one will be expected to discuss; the exact points that will be presented by the author of a paper with a certain title. The title of a paper should be a general guide to its contents, not a rehearsal of them. An abstract which indicates the specific phases of the subject to be taken up, and the author's position and chief argument regarding them renders possible the best kind of discussion—discussion which brings in new matter, to the point, and entailing the least waste of time. Will not the committee charged with the preparation of the program next year carefully consider the mat-

ter? Has not the Society some opinion to express regarding it?

A Visit From the Official Organizer of the A. M. A.—Dr. J. N. McCormack, of Bowling Green, Ky., is expected in Colorado within the next two months. He has arranged for a tour through the Northwest, and on his return will try to come in personal contact with the profession of Colorado in three or four meetings to be held in the larger towns in different sections of the state. The personality of the man, apart from his official mission among us, will lend value and significance to these gatherings. Our confidence and satisfaction in the importance and worthiness of our profession is strengthened by personal contact with such a leader. And his enthusiasm for the cause of medical organization, which he represents, will give us renewed interest and earnestness in its service.

The *Charter* of the Colorado State Medical Society has slipped out of its archives, and its provisions seemed to be quite unknown to those who have of late been most active in conducting the business of the Society. At the last annual meeting a committee was appointed to look into the matter, and this committee will report to the House of Delegates at the coming meeting. Suffice it to say here, that this charter, although broad and indefinite in most respects, is specific in a few points. If the Society wishes to preserve its historical continuity and remain a responsible incorporated body under this charter, its By-laws must reorganize these specific provisions, and some modification of them may be called for at the coming meeting.

ORIGINAL PAPERS

SUBNORMAL TEMPERATURE IN TUBERCULOSIS.

By MOSES COLLINS, M.D., Denver.

According to many authorities consulted on temperature, a range from 97.2° to 99.5° may be considered within proper

boundaries and under certain circumstances normal, although this temperature may be exceeded for a very short period. Under ordinary circumstances the temperature is highest between 5 and 8 P.M. and lowest from 2 to 6 A.M. The difference between the highest and lowest points is about 1.8°, although exceptionally it may amount to 3.6°.

Since normal temperature varies to such an extent in different individuals, we may expect to find an equal deviation in sub-normal temperature. Unless we knew positively in each individual case what the normal temperature had been before attacked by tubercular disease, it is impossible to say how far from normal is the sub-normal temperature in this or that particular case. Therefore, it is of more than passing interest to find that after a limited stay in a sanitarium of only a few days there will be noted a persistent sub-normal temperature in many patients. Persistent sub-normal temperature may be present in convalescents from fever, in acute alcoholism, myxedema, starvation, wasting diseases and poisoning from carbolic acid and other toxins.

The frequency with which sub-normal temperature is met with in pulmonary tuberculosis has caused the question to be often asked whether such sub-normal temperature had any particular significance in this disease. With a view to elucidating this point a careful and thorough investigation has been made. For the purposes of comparison and control three of the employees of the hospital, known to be sound and healthy, were selected and their temperatures taken every three hours in a like method with that of the patients.

Of the fifty-four male patients in the National Jewish Hospital for Consumptives, seventeen were selected as proper for investigation, because of the character of their temperature charts. The duration of the disease in these patients varied from four months to fifty-one months. Only six had residence in Colorado before being admitted to the hospital. Ten of the seven-

teen gave a history of fever previous to admission. Six had normal temperature and one sub-normal temperature. Five of the seventeen were incipient cases, seven were of the first stage, and five in the second stage. All of the seventeen cases had made more or less improvement in their general condition and had gained in weight. Their temperaments varied, some being of a phlegmatic nature, some sanguine, some choleric and some of a strumous and phthisic diathesis. Five of the patients were of an active disposition, five semi-active, and seven of an indolent disposition. The temperature of these patients was taken every three hours during the summer months by Dr. Hugo Freund, one of the internes, with the greatest care and verified in every possible way.

A thorough microscopic examination of the blood and urine was made in each case. The percentage of hemoglobin varied from 85 per cent to 95 per cent, the number of white corpuscles from 4,800 to 7,200, red corpuscles from 3,760,000 to 4,880,000, the number of grammes of urea from nine to thirty-seven. Of the remaining male patients in the hospital at the time of the investigation, examination of their charts showed that nine had had a sub-normal temperature since their admission. Of these nine, six have shown a temperature curve that has increased in sub-normality since their residence in the hospital. Two of the remaining three were in Colorado over a week before their admission. Twenty were normal on their admission and became sub-normal in every case, in time ranging from two to fifteen days. The fall from time of admission was usually rapid, mostly in a few days. The change, however, was gradual. Two cases showed hectic fever on admission. Both showed a rapid decline, the summit of the curve declining more quickly than the low morning record until in a short time both ran a sub-normal course. Three showed a very irregular chart, the variations between morning and afternoon records varying often

two degrees. Three patients have run a course with increased temperature.

Of the twenty-three female patients, seven were sub-normal on admission. Two of these became fever cases, one had fever (high) occasionally, the remainder continued sub-normal except occasionally. Eight were normal on admission. Their temperature became sub-normal in a few days but none remained so, but would rise to normal or above occasionally. Eight were above normal on admission. One has since varied between normal and above normal, while the remainder dropped to sub-normal in from one to fourteen days, but have since varied between all three conditions, sometimes remaining a full month sub-normal. In no case has there been a marked sub-normal temperature, not even in the morning, and the curve has generally been slight.

The table which accompanies this article gives the duration of the disease, temperature before admission, temperature on admission, the condition of the lungs on admission, improvement or otherwise, percentage of hemoglobin, the blood count, the amount of urea excreted, and whether the patient was active or not, in each particular case.

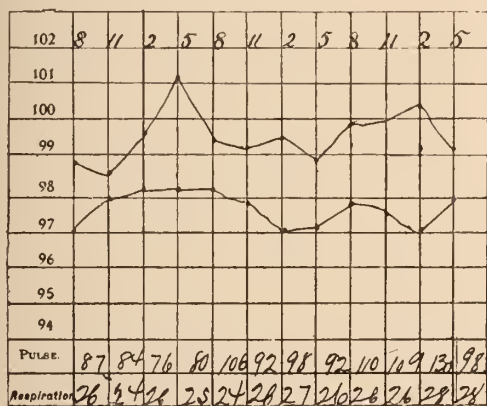
Of the five incipient cases there was a regular variation between the oral and rectal temperatures, with a maximum variation in the morning of one to two degrees and one degree in the evening.

Of the seven first stage cases, three showed an irregular or erratic curve. In one instance, Case 6, both the oral and rectal temperature was the same. Of the five second stage cases one was irregular, Case 3, even the oral temperature at one time being four-tenths of a degree higher. In the case of the three employees, two out of the three showed an irregular curve.

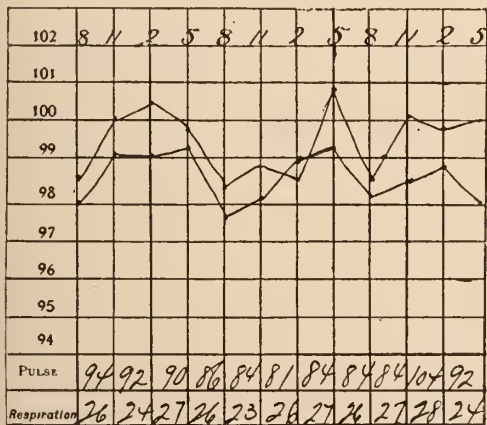
A careful study of the temperature charts will demonstrate the following: That the variation between the rectal and oral temperature is often irregular and not, as is generally supposed, regular with a difference of about one degree, and that dif-

ference between the rectal and oral temperatures is much greater in the morning than in the evening as a rule; 2, that occasionally the rectal and oral temperatures may not only be the same, but the oral may even be higher; 3, that subnormal temperature can be found, that is below 98.5° , probably as frequently in healthy individuals as in those afflicted with tuberculosis; and, 4, that sub-normal temperature cannot be said to be of any particular significance in the diagnosis of uncomplicated tuberculosis.

CHARTS—Upper curve rectal, lower curve oral temperature.



M. S.—No. 5. First stage.



C. G.—No. 3. Second Stage.

INCIPIENT CASES.

No. 1. Regular variation between oral and rectal, maximum variation being $1\frac{1}{2}$ degrees in A.M. and variation of one degree in P.M.

No. 2. Regular maximum in A.M. two degrees higher in rectum than oral. Variation of one degree in P.M.

No. 3. Regular rectal $1\frac{1}{2}$ degrees higher in A.M. than oral. In P.M. rectal one degree higher than oral.

No. 4. Regular one to two degrees higher in rectum in A.M. than oral. In P.M. regular variation of one degree, being higher in rectum than oral.

No. 5. Very regular. Rectal and oral varying one degree both A.M. and P.M.

N. B.—In no incipient case was oral higher than rectal.

FIRST STAGE CASES.

No. 1. Regular maximum of one to two degrees higher in rectal than oral in A.M. In P.M. rectal one degree higher than oral.

No. 2. Erratic. Minimum one-half degree higher in A.M. in rectal than in oral. In P.M. rectal one degree higher than oral.

No. 3. Regular maximum in A.M. Rectal one degree higher than oral. In P.M. variation of three-fourths of a degree higher in rectum than oral.

No. 4. Regular, rectal being $1\frac{1}{2}$ degrees higher than oral in A.M. In P.M. rectal $\frac{1}{2}$ degree to one degree higher than oral.

No. 5. Irregular, greatest variation in P. M., rectal being three degrees higher than oral.

No. 6. Erratic, rectal being higher than oral in A.M. At 8 A.M. only one morning was rectal and oral the same, registering 98 degrees.

N. B.—In no case except the last was rectal the same as oral, always (rectal) being higher.

Case No. 7. Regular maximum in A.M., rectal being two degrees higher, and also about same variation in P.M.

SECOND STAGE CASES.

No. 1. Regular maximum of two degrees in A.M., rectal being higher. In P.M. regular variation of one degree, rectal being higher.

No. 2. Regular, variation of one-half degree, both A.M. and P.M., rectal being higher.

No. 3. Irregular, greatest variation being in P.M., rectal being higher except one time when oral was 4/10 degree higher.

No. 4. Regular, maximum in A.M., rectal being two degrees higher. In P.M. rectal one degree higher than oral.

No. 5. Regular A.M. and P.M. Rectal one degree higher than oral.

HEALTHY EMPLOYEES.

No. 1. Regular in A.M. and P. M., rectal being three-fourths of a degree higher than oral.

No. 2. Irregular, maximum in A.M., rectal being higher.

No. 3. Irregular, maximum being in A.M., rectal being higher.

Name	Months of Disease	Fever before Admission	Temperature on Admission	Stage of Disease	Improvement	Hemoglobin %	White Corpuscles	Red Corpuscles	Urea per 1000	Activity of Patient
H. C.	21	Yes	N.	2nd	—	90	6160	4320000	9	—
L. G.	11	Yes	S. N.	Inc.	+	95	7040	4640000	18	+
A. G.	23	No	S. N.	Inc.	+	95	6080	4140000	15	—
J. G.	4	Yes	N.	2nd	+	90	6180	4080000	18	+ —
T. G.	16	No	N.	Inc.	+	90	5920	3920000	52	+
C. G.	37	No	S. N.	2nd	+	90	5680	4040000	17	—
N. G.	12	Yes	S. N.	Inc.	+	95	6640	4880000	17	+
J. K.	12	Yes	S. N.	1st	+	90	6080	4360000	16	—
S. L.	20	Yes	S. N.	2nd	—	95	6400	4520000	40	+ —
I. L.	10	Yes	S. N.	1st	—	90	6040	5040000	26	+
E. L.	8	Yes	S. N.	1st	+	85	6640	4200000	40	—
S. M.	8	Yes	N.	1st	+	90	6480	4240000	19	—
S. M.	26	No	S. N.	2nd	+	90	7060	4230000	37	—
N. P.	8	Yes	T.	1st	—	85	4800	3880000	22	+ —
M. S.	51	No	N.	1st	+	100	5920	4820000	30	+
A. S.	15	No	S. N.	1st	—	90	7120	3760000	27	+ —
S. W.	6	No	N.	Inc.	+	90	6800	4080000	20	+ —

ANNUAL ADDRESS OF THE PRESIDENT OF THE DENVER ACADEMY OF MEDICINE.

By HENRY SEWALL, M.D., Denver.

There is probably no medical community in the world that is more heterogeneous than that of Denver. The diversity includes nationality, educational affiliations and points of view, professional and social. As climatic reasons determine the selection of this location in a large percentage of

cases, our doctors come to us ready made, as it were, being for the most part men who have already been long established in practice elsewhere. Partly for this reason and perhaps because the tubercle bacillus is prone to attack the body containing the finer grade of nervous system, the personnel of the medical profession in Denver, both from an intellectual, a moral and a social standpoint, is generally conceded to be far above the average. Denver is medically unique in the great number of new

aspirants for practice who annually take up here their abode, and for the large ratio of doctors to the population at large. The lay community here is also peculiar in its ephemeral character. People come from some ulterior motive of health or fortune to sojourn rather than to live. The home and the family physician are not characteristic of our environment. These facts make Denver a more favorable resort for the medical newcomer, but they sadly eat at the foundations of a hard-earned professional reputation.

The prestige which should be won by years of professional devotion is naturally lightly regarded by a community made up so largely of newcomers, whether lay or medical. There is, then, a special reason why in Denver there should be some organization capable of uniting the highly trained medical forces which are continually streaming hitherward. There should be an institution which may stand before the eyes of all members of the profession as an epitome of some cosmic Hall of Fame, admission to which is to be determined, not by negation of inefficiency, but by positive helps given to science. In so miscellaneous a medical fraternity as ours it is astonishing that the friction resulting from sharp competition is not more in evidence. Nevertheless, now and then there have been signs of a dangerous going astray of some of the members of our flock, who seem to think that professional pre-eminence is properly sought for by cabal, surreptitious intrigue, or the wielding of the influence incidental to a position of authority. An institution such as I have in mind should give such tone to the views of the medical community that medical public sentiment would turn to humiliation any effort of the ambitious to supplant with mere smartness or ingenuity that substratum of hard, self-denying work which all history shows must be the basis of any enduring success.

The County Medical Society is competent to deal with derelictions of the code of ethics, but our young men and the worthy

stranger should have set before them the possibility of acquiring a membership among a body devoted to exploiting the ideals which lead to personal betterment and professional improvement.

In all lands scientific bodies have found their working capital in *books*, and to-day no profession can hope to fulfill its duties to its clients, much less to increase the sum of human knowledge, without access to the lore of universal thought and experience as represented in the library.

On the evening of Saturday, May 27th, 1893, there was held in the office of our lamented colleague, Dr. Eskridge, a meeting which ought to be historic in the scientific annals of Denver, for there was formed the Colorado Medical Library Association. There were present Drs. Eskridge, Munn, E. J. A. Rogers, J. N. Hall, Nickerson, Snitcher, and the speaker. Through the co-operation of admirable Librarian Dana, it was soon found that a valuable library could be created almost as by the stroke of a wand. It must be remembered in passing that in those days some who have gone before us, as well as some who are still with us, gave generously of their means to launch and support the infant library. The institution grew apace, but there was somewhere a fatal defect in its administration. The library was practically useless to the average medical seeker because its literature was not so arranged as to be readily available. The Library Association languished until early in 1903, when it occurred to Dr. W. A. Jayne that the objects of the Library Association might be fulfilled in other ways, and the interests of the medical profession might be furthered by the establishment of an Academy of Medicine along the lines of similar institutions in some of the eastern cities.

It was the ostensible object of this proposal that this new association should own a building in which a library, served by an efficient librarian, should be collected, maintained, and in which medical gatherings might be convened. It was designed

that a sort of Free Masonry should mark the membership of this organization; its Fellows should be carefully culled from the profession at large, but, also, its roster should represent the grand total of those who might be willing to advance the higher interests of medicine. Many were the plans suggested by which our incorporated society might acquire property and a medical home. Lack of faith and timidity paralyzed us all. Finally a single member of the profession, with sound business acumen, offered us accommodations in a projected building; and here we are now in an attractive room, which forms an assembly hall vastly more satisfactory than any which has hitherto been available for medical meetings. Over yonder is the nucleus of a library as great as we choose to make it.

The Academy has already received the gift of 77 medical volumes. There are on file and readily accessible 134 titles of current journals. The Colorado Medical Library Association has stored with us about 1,200 of its volumes hitherto scattered about the city, and there is little doubt we could, if there were here room, acquire the additional 5,000 to 7,000 volumes belonging to the Library Association and now in charge of the Denver Public Library.

Can any one doubt that we need a whole building to ourselves? Does it not seem clear that such a building, containing ample accommodations for a library, medical meetings, committee and club purposes could be established on a sound financial basis if so designed as to supply a sufficient number of professional men with offices?

I trust that this meeting will not adjourn without the unanimous intention that the Denver Academy of Medicine must and shall, in the near future, own a building which shall include a medical library, and a club house, which shall be at once a home and a temple.

THIRTY-FIFTH ANNUAL CONVENTION

of the

Colorado State Medical Society

October 3, 4, 5, 1905

COLORADO SPRINGS, COLORADO

PROGRAM

Tuesday, October 3rd

10 A. M.

PAPERS.

1. "Ocular Injuries."
MELVILLE BLACK, Denver.
2. "Retinal Hemorrhage in Apparently Healthy Eyes."
E. W. STEVENS, Denver.
3. "Silver Salts in Ocular Therapeutics."
GEO. F. LIBBY, Denver.
4. "The Chemic Composition of Medicinal Plants."
EDWARD C. HILL, Denver.
5. "Mineral Springs."
E. J. A. ROGERS, Denver.
6. "Report of Cases of Morphinism."
J. E. COURTNEY, Denver.
7. "Reports of Some Additional Cured Cases of Graves' Disease."
GERALD BERTRAM WEBB, Colorado Springs.

2 P. M.

1. "Ear Sequellae of Adenoids; A Report of Cases."
R. G. DAVENPORT, Trinidad.
2. "Radical Mastoid Operation for the Cure of Chronic Otorrhoea."
J. M. FOSTER, Denver.

3. "Submucous Window Resection of Nasal Septum."
WM. C. BANE, Denver.
4. "The Dunbar Treatment for Hay Fever."
ROBERT LEVY, Denver.
5. "The New Pharmacopoea."
J. TRACY MELVIN, Saguache.
6. "Some Observations on Four Cases of Spotted Fever Occurring in Colorado."
J. M. BRADEN, Carbondale.
7. "Report of a Case of Round Worms in an Adult."
M. D. GIBBS, Van Houton, New Mexico.
8. "Report of Delegates to A. M. A."
W. A. JAYNE, Denver.
8 P. M., BANQUET.

3. "Tubercular Meningitis in Colorado, with Report of Cases."
J. N. HALL and S. D. HOPKINS, Denver.
4. "Tuberculosis of Joints."
GEO. B. PACKARD, Denver.
5. "The Treatment of Pulmonary Tuberculosis."
G. R. POGUE, Greeley.
6. "Roentgen Therapy of Tubercular Glands."
GEO. H. STOVER, Denver.
7. "Electro-therapeutics and X-Ray; To What Extent Practicable to the General Practitioner."
E. GARD EDWARDS, La Junta.
8. "Dermatoses and Dry Climate."
J. M. BLAINE, Denver.
9. "Typhoid Fever and Its Treatment, with Report of Cases."
SHERMAN WILLIAMS, Denver.
10. "A Form of Gastrointestinal Toxemia of Early Childhood."
H. B. WHITNEY, Denver.
8 P. M.

Stereopticon Exhibition of Interesting Skiagrams.
By S. E. Solly, G. H. Stover and S. B. Childs.
Followed by a Vaudeville Smoker.

Wednesday, October 4th

- 10 A. M.
1. "Report of Cases of Heart Disease."
G. H. CATTERMOLLE, Boulder.
2. "A Note On a Method of Measuring Venous Blood Pressure in Man."
HENRY SEWALL, Denver.
3. "A Case of Purulent Endocarditis."
F. P. GENGENBACH, Denver.
4. "Nervous Dyspepsia."
H. T. PERSHING, Denver.
5. "A Case of Nervous Vomiting Simulating Pyloric Obstruction; Operation; Results."
W. T. LITTLE, Canon City.
6. "Diseases of the Stomach Requiring Surgical Treatment."
I. B. PERKINS, Denver.
7. "Some Anomalous Cases of Cholelithiasis."
R. C. ROBE, Pueblo.
8. "How the Medical Profession Can Aid in the Perfecting of Hospital Management."
MOSES COLLINS, Denver.
9. "A Case of Subcortical Cerebral Gumma; Death; Autopsy."
GEO. A. MOLEEN, Denver.
2 P. M.

1. "The Use of the X-Ray in the Diagnosis of Pulmonary Diseases."
S. E. SOLLY, Colorado Springs.
2. "The Albuminuria of Phthisis."
J. F. McCONNELL, Colorado Springs.

Thursday, October 5th

- 10 A. M.
1. "On the Occurrence of Thrombosis of the Left Iliac Vein After Appendectomy and Other Abdominal Operations."
CHAS. A. POWERS, Denver.
2. "Compound Fracture of the Vault with Loss of Brain Tissue."
MAURICE KAHN, Leadville.
3. "The Avoidable Mortality in Surgery."
J. G. SHELDON, Telluride.
4. "The Pelvic Girdle vs. the Abdominal Supporter in Certain Abdominal Diseases."
C. D. SPIVAK, Denver.
5. "A Case of Rupture of the Uterus."
W. H. SWAN, Colorado Springs.
6. "Floating Bodies in the Knee Joint, with Report of Three Cases."
F. GREGORY CONNELL, Salida.
7. "Bronchiectasis; Report of a Case."
O. M. GILBERT, Boulder.

8. "Asthma; A Report on the Etiology and Treatment of Some Unusual Cases."

JAS. R. ARNEILL, Denver.

2 P. M.

1. "Deforming Injuries of Ligaments at the Wrist Connecting with Fractures."

GEO. W. MIEL, Denver.

2. "Chiloplasty and Cancer of the Mouth."

W. W. GRANT, Denver.

3. "Report of the House of Delegates."

J. M. BLAINE, Secretary, Denver.

4. "President's Address."

FRANK FINNEY, La Junta.

All papers limited to 15 minutes. Discussions limited to 5 minutes.

Members must register and secure badges before reading or discussing papers.

Note.—Physicians who expect to attend the banquet on Tuesday evening, will please notify Dr. E. R. Neeper. Tickets must be secured before the close of the afternoon session. Price, \$2.00.

On Wednesday evening President Finney and the El Paso Medical Society will give a Vaudeville Smoker in the Antlers' ball room.

COUNTY MEDICAL SOCIETIES.

Boulder.—The Boulder County Medical Society held its monthly meeting at the Court House, Thursday, August 3, 1905. The members present were: Dr. O. M. Gilbert, President; Drs. Queal, Ambrook, Reed, Miles, Rodes, Spencer, Packard, C. A. Trovillion and G. H. Cattermole. There were several guests present.

Drs. C. R. Knox, Dessie Robertson and Carbon Gillispie were made members of the society. Dr. G. H. Cattermole was made second delegate, to serve only for the present year.

The Secretary was instructed by the society to correspond with the Secretary of the Colorado Medical League relative to the restriction of the practice of unlicensed quacks in Boulder county. One, Dr. Potterf, advertises to be here soon; F. A. Siegal has been here for some time; others have been selling nostrums on the streets.

Dr. O. M. Gilbert presented the paper of the evening. It was a very valuable and suggestive paper, entitled **Some Clinical Reports of Typhoid Fever**. The essayist called attention to many atypical features of typhoid. The first

case was one which ran an afebrile course after the first three days. The second was a case showing persistent emesis and tachycardia; the pulse rate was 128 to 160, without organic heart disease. The third case was a girl of fifteen years, who developed an eruption resembling erythema nodosa. It occurred just before the menstrual period and was probably a case of so-called menstrual erythema. The fourth case was a child of twenty months, who developed meningeal symptoms in the second week, and became deaf and blind. Recovery was complete. The fifth case was that of a young woman who developed melancholia in the early stages of the attack of typhoid. She recovered. The sixth case was a boy of seventeen years who developed myocarditis. Defervescence had begun when the pulse grew weak, rapid and irregular; cardiac dullness was increased to the left; he became dyspneic, there was some pain, and a soft, systolic murmur. He was in a critical condition for several weeks, but finally recovered. The seventh case was a man who thought he had suffered from typhoid fever two years before. When first seen in this attack he had a mitral murmur. After a four weeks' run his temperature was normal for two weeks, then went through another run of two weeks. This was followed by two weeks of subnormal temperature, then a slight rise of only a few days' duration. These recurrences of fever were not due to indiscretions in diet, but may have been due to re-infection. The eighth case was that of a young man who had an evening temperature of $99\frac{1}{2}$ to 101 degrees, with normal morning temperature. Other diagnostic signs were slight or lacking, but his blood gave the agglutination test.

Dr. Gilbert uses a mixed diet for typhoid fever cases; he has had better results from this than with an exclusive milk diet. He has found Ficker's test useful, but it failed in one typical case. His paper was freely discussed and brought out many good points in diagnosis and treatment.

Dr. Gilbert called attention to the persistence of myocarditis for a long time after recovery from typhoid, and recommended that such patients be kept from severe exertion as long as there are symptoms of weak heart. He had recently posted a case which presented extreme dilatation of the heart; the man had typhoid eight months before, and during convalescence he had indulged in mountain climbing and beer drinking.

Dr. G. H. Cattermole led the discussion of **Diarrheal Diseases**. He believes that the absence of cholera infantum in Colorado is due to the infrequency of toxic poisons in the milk. Continued high temperature, day and night, favors bacterial growth; and such growth develops toxins in the milk, which cause the symptoms known as cholera infantum. Our cool nights retard these changes in the milk.

Many diarrheal cases are caused by taking more food than can be digested, or food that is difficult of digestion. If such undigested food is vomited, or thrown off as diarrhea, the patient may have little or no fever, but if the bowel movements are checked, fever is apt to result. He has recently seen an infant of three months, with a temperature of 106 degrees, due to retained undigested cow's milk.

Ileo-colitis has been of a severe type in this locality during the past two years. Our cases are probably due to the Shiga or the Harris form of infection. We should study the possible sources of infection with the hope of preventing the disease; we should also use curative serums if reports of their use are favorable. This subject was discussed by the members present.

Mr. McClusky reported the pathological findings in a case recently posted, where the liver showed fibroid degeneration and contraction, and the right kidney weighed 455 grains, which is more than three times that of a normal kidney. Microscopic examination of the kidney showed great excess of fibrous tissue. Some areas seemed to have broken down into cavities containing blood and necrosed tissue. Otherwise it was typical of the large, white kidney. There was no albumen in the urine. This kidney may not have been functioning for some time prior to death.

The society adjourned to meet again the first Thursday in September.

GEO. H. CATTERMOLLE, Secretary.

Denver.—The Medical Society of the City and County of Denver met May 16th in the hall of the Denver Academy of Medicine.

Dr. G. H. Stover spoke of the difficulty of preparing satisfactory lantern slides of radiographs. He then gave a stereopticon exhibit of X-ray pictures showing the position of various foreign bodies lodged in different parts of the head, trunk and limbs, illustrating fractures

and diseases of the bones, and dislocations and diseases of the joints.

Dr. L. Freeman had found it extremely difficult to interpret a skiagraph. It was absolutely necessary to have some one familiar with such pictures to read them. He had been misled by the distortion of shadows, and even with the interpretation of the expert such pictures must be taken with a grain of salt. But they were invaluable, and should be used more than they are. In every case of injury about a joint a skiagraph could be obtained.

Physicians as Seen by Charles Dickens was the subject of a paper by Dr. C. D. Spivak. This was the third paper of a series upon physicians in fiction, which Dr. Spivak had read before the society; the others dealing with the physician as seen by Fielding, and as seen by Holmes. Thirty-two of the characters portrayed in Dickens' works belonged to the medical profession, and with a possible exception of three, all were gross caricatures. Allen Woodcourt, in Bleak House, was the only one represented as being a gentleman. But on investigation it was found that the other professions fared no better in Dickens' works; the lawyers and clergymen were equally caricatured. Dr. Spivak illustrated his points by extensive reading from Dickens' works.

Dr. T. M. Burns, on behalf of the committee to look into the matter, reported, recommending an appropriation of \$80 from the funds of the society to assist in meeting the obligations of the Medical Legislative League and the Legislative Committee of the State Medical Society.

The society then adjourned for the summer months.

Fremont.—The Fremont County Medical Society met in regular session in Canon City, September 4th. Members present: Drs. Rambo and Edwards of Florence; Dr. Henshaw of Chandler; Drs. Lille, Graves, Craven, Moore, Wade, Cannon and Phelps of Canon City. After disposing of the regular business, Dr. Wade read an interesting paper on **The Function of the Kidney**. Dr. Edwards followed with a very interesting and original paper on **Tuberculosis**. Meeting adjourned and refreshments served.

MARY E. PHELPS, Secretary.

San Luis Valley Medical Society met in special session at Wagon Wheel Gap on Tuesday,

August 15th, 1905, as guests of Dr. Biles of Amethyst. A goodly number of members were present. Dr. Chisholm of Kansas City was a visitor.

The business session was convened upon the arrival of the train from the East. The President, Dr. Whedon, presided. The Secretary not being present, Dr. C. W. Russell acted as Secretary.

Dr. John McFadzean read a paper entitled **Our Mexican People from a Physician's Standpoint.**

Dr. C. W. Russell read a paper entitled **The Office Equipment of the General Practitioner.**

Discussion of both papers was general. Dr. McFadzean was requested to furnish the Secretary with a copy of his paper for publication in some Colorado medical journal.

The meeting was then adjourned to meet in Monte Vista in October, exact date to be announced later.

The members, with their wives, then adjourned to the hotel, where a sumptuous dinner awaited them. After dinner the scenery and out-door games were enjoyed, and later the party were treated to the baths.

The day came to a close all too soon, and the members and visitors departed with a warm spot in their hearts for Wagon Wheel Gap and their host, Dr. Biles.

A. R. POLLOCK, Secretary.

"Weld County Medical Society, in regular session assembled:

"Resolved, That whereas Colorado is the only important state not specifically demanding an **examination for a state license to practice medicine**; and whereas, there at present exists an acute, if not chronic, congestion of the physician body; and whereas the law regulating the practice of medicine in Colorado grants the regularly appointed board of examiners the right to examine all applicants for a state license; therefore, this Society does earnestly petition and request that the Board of Examiners shall exercise their full power and prerogative of requiring a written examination for each and every candidate for a state license who shall apply therefor. By so doing the Society believes that the entire medical profession of the state will be greatly benefited."

The Society was instructed to send a copy of this resolution to each County Society, and Drs. Graham and Church were appointed a committee to confer with our delegate, Dr. Call, as to the best method of introducing and furthering the same.

At this juncture Dr. Miller was duly scheduled to read a paper on **Bright's Disease**, but as several members were hastily summoned to a critical case, the reading of the paper was deferred.

C. B. DYDE, Secretary.

Weld.—The regular meeting of the Weld County Medical Society was held at the office of Drs. Pogue and Hughes on Monday evening, July 31st, at 8 o'clock. The meeting was called to order with a large attendance of members. The application of Dr. G. E. Nelson of Windsor, Colorado, for admission into the Weld County Medical Society, was favorably received. Moved by Dr. J. K. Miller; seconded by Dr. R. F. Graham.

In view of increased rates imposed by the Commissioners of Weld County, which are now in force at the Greeley hospital, it was voted that a committee be appointed to confer with said Board of Commissioners, to secure, if possible, more reasonable rates.

The Society then adjourned as a medical body to convene as a business body to discuss the question of fees and other matters relating to the welfare of medical practitioners. The questions being freely discussed and satisfactory progress made, the Society again assembled and as such endorsed the Fee bill, as outlined by the physicians of Greeley.

August 28th.

The regular meeting of the Weld County Medical Society was held in Dr. Pogue's office on Monday evening, August 28th, with the Vice-President, Dr. Ringle, in the chair. Routine business being disposed of, Dr. Church introduced the following resolution, which was duly seconded and unanimously passed:

OTHER MEDICAL SOCIETIES.

Denver Academy of Medicine.

The annual meeting was held in the hall of the Academy, Friday evening, April 28th. The President, Dr. Henry Sewall, delivered the annual address, which is published in full on pp. 206-8. The report of the Treasurer showed a balance of more than \$500 in the treasury. The report of the trustees estimated the probable annual income of the Academy at \$1,100, sufficient to cover the probable expenses of maintaining the Library.

On motion the President was directed to appoint a committee to take up the matter of raising funds for a permanent building to belong to the Academy, to which it might remove at the expiration of the term of three years, for which its present quarters were leased.

Th annual election resulted in the choice of the following officers and committees:

President, G. B. Packard, M.D.
Vice-President, Leonard Freeman, M.D.
Treasurer, C. A. Graham, M.D.
Secretary, W. C. Mitchell, M.D.
Trustees, T. H. Hawkins, M.D., Henry Sewall, M.D.
Councillors, E. J. A. Rogers, M.D., J. N. Hall, M.D.
Librarian, F. W. Kenney, M.D.
Committee on Library, C. D. Spivak, M.D.
Committee on Admissions, D. H. Coover, M.D.

Colorado State Medical Society

Next Meeting at Colorado Springs,
October 3-4-5, 1905.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month..G. H. Cattermole, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Bilborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, Septem-
ber and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, Septem-
ber and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July
and OctoberH. C. Turrell, Durango
San Luis Valley, next meeting in May.....A. R. Pollock, Monte Vista
San Miguel, third Saturday in each month.....I. R. Bancroft, Telluride
Teller County, fourth Tuesday in each month....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

ONCE MORE.

The Colorado State Medical Society will meet in Colorado Springs on October 3rd, 4th and 5th, in the ball room of the Antlers hotel. The House of Delegates will meet at 8 p.m. on Monday, Oct. 2nd, in order to transact all the business possible before the beginning of the scientific sessions next day.

There is a one-fare round trip rate from Denver and Pueblo to the Springs on Tuesday, October 3rd, good for ten days.

The official "Delegates' Train" from the north will leave Denver at 5 p. m., Monday, via the Santa Fe route, arriving at Colorado Springs at 7 p.m.

The official "State Society Train" leaves Denver next morning at 8 o'clock, over the same road, and reaches Colorado Springs at 10 o'clock, in time for the opening session. The one-fare tickets are good on this train.

Everyone should arrange to be there during the entire meeting.

There will be a banquet on Tuesday evening at the Antlers. It is requested by the committee that every one who can attend will notify Dr. E. R. Neepser in time, so that reservations can be made. Price per plate, \$2.00.

On Wednesday evening a vaudeville smoker will be given in the ball room by President Finney and the El Paso County Medical Society.

Arrangements will be made for entertaining the ladies who may accompany their husbands.

Make your arrangements so as to be there for every session.

FRANK FINNEY, President.

J. M. BLAINE, Secretary.

Colorado Medicine

*The Official Organ of the Colorado State Medical Society
And its Constituent Societies.*

PUBLISHED MONTHLY BY THE COLORADO STATE MEDICAL SOCIETY

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Press of J. B. Stott & Company, 1839 Champa Street, Denver

Colorado State Medical Society

The Next Meeting Will Be Held at Denver,
October 2-3-4, 1906.

OFFICERS.

President:

H. G. Wetherill, Denver.

Vice-Presidents:

First, E. T. Boyd, Leadville; Second, Perry Jaffa, Trinidad;

Third, C. A. Ringle, Greeley.

Secretary:

Melville Black, Majestic Building, Denver.

Treasurer:

S. E. Solly, Colorado Springs.

Board of Councillors:

Term Expires:

1906—P. J. McHugh, Fort Collins; E. J. A. Rogers, Denver.

1907—J. N. Hall, Denver; Hubert Work, Pueblo.

1908—C. F. Gardiner, Colorado Springs; S. D. Hopkins, Denver.

1909—J. T. Melvin, Saguache; W. W. Reed, Boulder.

1910—Frank Finney, La Junta; E. T. Boyd, Leadville.

Delegates to American Medical Association:

Term Expires: Delegates:

Alternates:

1906—P. F. Gildea, Colorado Springs; H. A. Black, Pueblo.

1907—Hubert Work, Pueblo; H. R. Bull, Grand Junction.

COMMITTEES.

Publication Committee:

Term Expires:

1906—J. N. Hall, Denver.

1907—J. M. Blaine, Denver.

1908—Edward Jackson, Denver.

COLORADO MEDICINE

PUBLISHED BY THE COLORADO STATE MEDICAL SOCIETY.

VOL. II.

DENVER, OCTOBER, 1905.

No. 10

EDITORIALS

OUR JOURNAL UNDER NEW MANAGEMENT.

The meeting of the State Medical Society served to emphasize the truth of the statement made last month that "the journal owned, controlled and published by the Medical Society has come to stay." In spite of two propositions, as favorable financially and otherwise, as any that can be hoped for in that direction, the Society decided not to give up anything of the independence or of its absolute control of its publication.

It was, however, clearly the opinion of the majority that the income of the journal ought to be increased by the admission of ethical advertising; and the House of Delegates took the action necessary to allow of this without sacrifice of the advantage of second class postal rates, to which COLORADO MEDICINE is fully entitled. As soon as the necessary arrangements can be made a sufficient number of advertising pages will be added to each issue. As to whether the journal might be made more valuable and attractive under different management, no opinion was expressed; unless the unanimous vote of re-election to the Publication Committee of the former editor might be construed as a vote of confidence.

The permanence of the journal, however, and its vital relation to the whole Society, could not be considered fully demonstrated until it had passed through the ordeal of the change of the personnel of its active management. In the judgment of the writer the time had come for this

test. It is with pleasure and complete confidence in the future of COLORADO MEDICINE that he announces the election of Dr. James M. Blaine as its editor. Dr. Blaine brings to the work some experience, a wide acquaintance with the needs of the Society and its membership, the support of personal friends, and a strong desire to conduct a journal which will be in every way a credit to the Society. There will be no essential change of policy; and whatever ability the former editor could bring to the service will be as fully as heretofore, at the command of COLORADO MEDICINE.

At this time it is especially appropriate for anyone who has felt he could offer valuable suggestions, or be of assistance in the conduct of our journal (but who has neglected to proffer his aid) to come forward and tender the new editor his support. To make COLORADO MEDICINE the best journal of its kind in the country, it only needs the united and enthusiastic support of those who are now members of our State Society. Will you give it?

EDWARD JACKSON.

OUR POLICY.

Having assumed the duties of editor of "COLORADO MEDICINE," a word from me is not entirely out of place. This number, following so soon after the meeting of the State Medical Society, is necessarily thrown together in a hurry. I desire to acknowledge the able assistance rendered by Dr. Jackson, the former editor, in compiling this issue, and to also state that he is still a member of the Publishing Committee, and his advice will always be cheerfully sought and thankfully received.

The policy of the journal will not be changed. It will still remain as formerly, *the official organ of the State Medical Society*, and advice from any member of our Society will be gladly received.

As COLORADO MEDICINE is the medium of communication between our members, we desire regular reports from every constituent society in the state.

Following the recommendation of the House of Delegates, we will open our pages to legitimate advertising, but no advertisement will be inserted unless approved by the Publication Committee.

The House of Delegates of the A. M. A. at the Portland meeting passed a resolution calling on the various state journals to "assist the board of trustees in their efforts to suppress the advertisement of medical nostrums and to assist in securing pure food and pure drug laws."

"COLORADO MEDICINE" will always be found fighting for the welfare of humanity and the good of the profession, against quackery in or out of the profession, and its face will always be found toward the enemy.

Medically speaking, there are some things in Colorado that need "fixing," and when it comes to a question of right or wrong COLORADO MEDICINE will not be neutral.

Medicine is the *only profession* on earth and a high standard of ethics should be maintained. Until national legislation can be obtained, each state must make and enforce its own laws.

COLORADO MEDICINE, as the mouth-piece of the profession, will assist any project that has for its object the upholding of the law or the maintenance of ethics in this state.

J. M. BLAINE.

NOTE AND COMMENT.

The Colorado Springs Meeting was notable for some papers and discussions that entered upon new ground in the domain

of medical science; and the successful, enjoyable character of its social features. It was a well attended meeting, even without adding the qualification, "for one held outside of Denver." The program was somewhat crowded, and some who tried to follow the scientific sessions throughout felt that the time had come for the Society to limit the number of papers given a place thereon. Let a place on the program be something to be sought for, and it will become so valuable that members will be careful what they bring forward; and will send in the subjects of their communications at an earlier date, in conformity with the by-law of the Society with reference to this matter.

MINUTES OF LAST MEETING.

In order not to delay the October issue longer than necessary, it has been impossible to publish the minutes of our last meeting at this time. An abstract of these will be found in the November number.

MEDICAL POLITICS.

Along with the feasting and singing, the sitting round on hotel porches, and other unaccustomed things that the doctor indulges in when he goes to the State Medical Society, he sometimes tries his hand at politics. As a recreation it may give opportunity for the studious thought of the chess player, the strenuousness of the footballist, the nerve of the gambler, and the general goodfellowship of the drummer for a manufacturing druggist. Outsiders may sniff and condemn, but for those who have fairly entered into the "joy of the game," there is nothing like it. There can be no question but that it awakens an interest in the affairs of the State Society, among some who manifest little interest in it in any other way. Like all other games, it breeds a desire for immediate success, which may, at times, jeopardize important and permanent interests.

But it is not for those who lack skill at it, and still less for those who speak of it only with scorn to stand in judgment over it.

E. J.

PRESIDENT'S ADDRESS.

By FRANK FINNEY, M. D., LA JUNTA.
Ladies and Gentlemen and Members of the Colorado State Medical Society:

At this, the close of the Thirty-fifth Annual Session, it becomes my duty and high privilege to address you. Here, under the shadow of Pike's Peak, the "mascot" of this beautiful city, such privilege becomes doubly precious; the place, the surroundings, the very atmosphere are an inspiration.

In presenting to you my address to-day I have chosen to touch upon a variety of subjects of vital interest to us in our every day professional life, rather than upon some abstruse subject which might be of moment only as a means of theoretical discussion.

Thanks to our various committees and the loyal rank and file, we have enjoyed a delightful and profitable meeting. The papers and discussions have been quite up to, if not above the average of any previous meeting of this society. This is as it should be. Our profession, crowned with the vast and marvelous achievements of the century that has just passed into history, demands of the physician of to-day that he be a man worthy of the past, prophetic of the future, a man with a grand combination of heart, conscience and brain.

To build up such a profession in Colorado must be our earnest and constant endeavor. To do so we must begin at the fountain head:

THE EDUCATION OF THE INDIVIDUAL.

One of our most honored members read a paper, "Legislation versus Education," at our last year's session, in which he very justly took our profession to task for neglecting the education of the masses in mat-

ters of health and hygiene. Let us see to it that we have a fully equipped and thoroughly educated profession, and at the same time devote our best talents to the education of the masses in all matters of sanitation and health, both public and private.

To accomplish this in the most practical way we should begin with our public schools. Preventive medicine and hygiene should have its first application in the school room. Here our future generations of men and women get their first and lasting impressions, and here, then, these lessons should first be taught. In consideration of the enormous annual loss to the government and to society through disease, it is self-evident that it is the duty of the government to protect its people from the peril of preventable disease.

Our local and state boards of health should have enlarged and absolute powers in this direction. They should have the power to enforce medical supervision of all public schools not only in times of epidemic diseases, but at all times. The old saw about an ounce of prevention, etc., applies here. A national board of school hygiene with state and local boards has been suggested, but I fancy the machinery we already have, in our state and local boards of health, if given the authority and put in motion, would accomplish the desired results.

Health officers should be chosen on merit, rather than because of political affiliation or because they need the work. They should be men who will do their work, regardless of opposition, which is so frequently in evidence and which is generally due to ignorance. In many places school physicians have been appointed to have general sanitary supervision of the public schools. The wisdom of having such supervision is obvious. His authority should extend to a right to make examinations at stated times of all school children, segregate those afflicted with infectious diseases, advise as to errors of refraction and as to disposition of weak and

poorly developed children who are really injured by confinement to school. He should be preferably a man of some years' experience rather than a novice.

To better our professional condition there is no more potent factor than the *County Medical Society*. Every county in the state should have a good, live, working society. Here lies the secret of a vigorous and successful State Society. We have, in Colorado, been fortunate in having for members of our State Society some who have had experience in Pennsylvania and other eastern states, where the plan of organization which we are now following has been thoroughly tried and where it has proven so successful. Let us foster our county organizations above all else.

"The tendency of the age seems well-nigh worldwide for isolated groups of the community—trades, professions, etc.—to adopt for the common good of their membership certain methods of communal activity. The unanimity with which the medical profession seized the opportunity to reorganize on a basis effective for the general good of physicians and the commonwealth, is an illustration in point. It is fortunate that the adopted mode of organization affords through the autonomy of the county society so full an opportunity for varied experiments in medical socialism. Some societies are doing little or nothing in this direction; others are taking very advanced ground and are working out some theoretical and practical problems of exceedingly great interest."

My appeal to every member within the sound of my voice is: Go home and take up personally the work of your county society, and make *your* society a success. By doing so I am sure you will come back to the meeting of the State Society *next* year with renewed interest and a broader and better outlook for yourself and a friendlier feeling for your neighbor and fellow practitioner.

To be successful the county society must have its regular meeting, say once each month. A regular program should

be arranged at the beginning of the year, and each member supplied with a copy of it, so that each one shall know in advance what is coming up at the next meeting. Then as many as can possibly do so should attend the meetings regularly. The success of a society should not, and does not, depend on any one or two individual members, but on the rank and file, and I may add, on the secretary, for on him falls the drudgery of notices to members, correspondence with state officers, etc., etc. Subjects chosen for papers and discussions should be fittingly assigned to those members who will give them their best endeavor. Have live subjects for papers and discussions and then give the society a few minutes of your time each month and you will have a live and vigorous society. We have tried it in Otero County and have made a success of it. "Go thou and do likewise."

Under this head I think it is proper to discuss the question of fees for examination for life insurance. Some of the old line companies have cut the fee from five to three dollars where the amount of insurance applied for is less than \$3,000. The same amount of time and the same painstaking and thorough examination is required in the examination of an applicant for \$1,000 as for \$5,000 of insurance, and the minimum fee charged for such service should be \$5.00. To take less will only result in cheapening professional standing, and a still greater cut in the fee in the near future. Our county societies should take a bold and firm stand in this matter and give all insurance companies to understand that if they want first-class work they must at least pay a reasonable fee for it. Surely the great companies that pay such princely salaries to their high officials can afford to spend a reasonable amount for the protection in the medical examination of their risks. The State Society should back up the County Societies in this matter and the weight of its disapproval should be added to the individual protests which have gone in against this cut in fees.

Our State Medical Journal, "*Colorado Medicine*" and its editor and his associates deserve hearty commendation for the help and encouragement they have given the county societies, and for the many timely subjects taken up and discussed in the columns of the Journal during the past year. The question of our society owning and publishing its own journal successfully is settled, and is no longer an experiment. It occurs to me, however, that the Journal could be enlarged and improved and the cost to the society lessened by accepting legitimate and proper advertisements. I believe everything of a questionable character in the way of advertisements should be rigidly excluded from our Journal. I believe we should encourage a crusade against patent medicines, especially those containing large quantities of alcohol. The National Congress should pass a law making it obligatory to have the formula printed on all patent and proprietary medicines. The profession should certainly avoid using and prescribing pharmaceutical preparations the exact constituents and quantities of which they are ignorant. To do otherwise is simply to be used as a cat's paw by designing pharmaceutical manufacturers.

The question of *Medical Education* is one of such vast proportions that I can in my limited time, but touch upon the particular phase of this question that is paramount at the present time, viz.: its relation to reciprocity between the states. I am quite sure that I voice the sentiment of a vast majority of the profession when I say that reciprocity in the matter of license to practice *should* exist between all the states of the Union. That this happy and ideal condition can not be realized at once under the existing conditions is obvious. We can, however, better the existing conditions. We can set our standard high and work upward to that standard and in time, by patient and persistent effort, reach the desired end. The stumbling block in this matter of medical reciprocity has been the heterogeneous con-

ditions existing in the different states and the difficulty of getting one standard upon which all may agree. The outlook for a solution to this problem through the efforts of the Council on Medical Education of the American Medical Association, seems about to be realized. I quote from the address of the president of the council at its meeting held in Chicago, April 20, 1905:

"What would be regarded as a perfectly satisfactory state of affairs for medical education, we might say ideal state of affairs, from our present view-point? Such medical education must be equal to that required by England and Germany. It would comprise:

"1. A preliminary education such as would enable the student to enter our standard universities, with an average age of about 18; the passing of this preliminary education by the state authorities.

"2. Five years of medical work, the first to include physics, chemistry and biology. This year to be taken either in a medical school or in a college of liberal arts; and the last year of the medical course to be so arranged as to bring the student in actual contact with patients at the bedside.

"3. A diploma from a medical school in good standing, this being evidence that the student has completed his work and passed examinations satisfactory to the medical school; and, further, that the medical school, as shown on investigation either by the State Board or by the Council on Medical Education of the American Medical Association, or both, is doing the kind of work which entitles it to recognition.

"4. This diploma should be accepted as evidence entitling the holder to take an examination before his State Board. And, on passing such examination, which should be so conducted as to test in the most thorough way the candidate's knowledge, he should be entitled to practice.

"5. Essentially the same state of affairs medical should exist in all the states

and territories, and the license to practice conferred by one state should be recognized by all.

In view of the rapid progress made within the last twenty years, it would seem reasonable to believe that within another period of twenty years we shall find medical education in this country advanced to the condition which we have outlined. However, in order to accomplish such results, much must be done, and all the agencies which can assist must co-operate toward the desired end. The advancement cannot take place all at once, but one step at a time. There are many practical obstacles which must be overcome" * * *

Hence we see, the best men in the profession set the standard high. The trouble, however, is not so much in the standard of professional education as in the preparation therefor. The young man who is to take up the profession of medicine should first have a thorough preliminary education, such as is offered by our colleges and universities. Our American life, with its mad rush for the almighty dollar, is to blame for the hurry in the preparation for professional education, as in every other calling in our business and professional life. The signs of the times, however, point to better things.

If the rank and file of the profession in America are ready for this high standard, and will insist upon it, it will be but a short time until we will realize practical reciprocity between the licensing boards of the various states of the Union.

MEDICAL LEGISLATION.

During the year we have succeeded in securing the enactment of a new medical law. The success of those in charge of this matter meets with the hearty approbation of every loyal member of the profession. The good work was pushed to a happy conclusion by our own legislative committee and the legislative league, and, unlike previous efforts, this enactment succeeded in securing the signature of the Governor and became a law. It will be well for us

to prepare a vigorous defense of this law, as it will doubtless be attacked by its enemies at the next meeting of the legislature.

While the law is not perfect, it has many good points, and on the whole is one of the best state laws in the land. With a fair administration it will do much good for the people and the profession.

The State Examining Board should have the hearty support of every member of the profession, in order that we may derive the largest amount of good from the new law. We should see to it that the best timber available shall be put into the State Board, and then give the board united support. Our committee has had a hard and almost thankless task in securing this legislation; the secretary of the State Board has worked in season and out of season for the good of the profession, and deserves our hearty support and commendation.

Before closing, I desire to touch upon one more subject, viz.:

THE PREVENTION OF TUBERCULOSIS.

This is a hackneyed subject, but one of *vital* interest to our profession and to all the people of our commonwealth. We have the climate *par excellence* for tubercular patients. Thousands of those suffering from this dread scourge visit us annually. We, then, above all other states, should see to it that the most approved and best methods of prevention known to science shall be enforced. The plan I would suggest would be to concentrate the efforts of the State Board of Health and the State Medical Society, together with the various component county societies, in devising ways and means to the end desired. We should have a State Sanitarium, where researches can be conducted and patients treated. Branches of this sanitarium, with accommodations for out-door tent life, should be established and maintained. A vigorous policy of education of the masses in giving information along the line of *prevention* should be encouraged by the society and its individual members. Colo-

rado, instead of following, should be in the *lead* in all matters pertaining to Tuberculosis, not only in its cure through our invigorating air and God-given sunshine, but in devising ways and means for its prevention.

Laws are of no avail without the co-operation of the people, and you cannot secure this co-operation unless you have an intelligent public sentiment developed. This can only be secured by a well directed educational propaganda.

In closing, permit me to express my grateful appreciation of the honor conferred upon me in placing me in this exalted position, and to thank you and the members of the various committees for loyal support and co-operation.

ORIGINAL PAPERS

A PRELIMINARY NOTE ON A METHOD FOR MEASURING VENOUS BLOOD PRESSURE IN MAN.

By HENRY SEWALL, Ph.D., M.D., Denver.

Probably the most valuable single contribution made to physiology in the last century was the invention of the mercurial manometer by Poiseuille, in 1828, and its adaptation for graphic records by Ludwig in 1847. The blood pressure is the all-important factor of the circulation; it is the direct source of energy for blood movement. After extraordinary delay, physiologists were impressed with the importance of supplementing the fundamental conclusions established by vivisection with observations upon the human subject, and so, in quite recent years, our knowledge of human physiology has been considerably amplified through more or less perfect methods for measuring circulation energy in man.

The clinicians have eagerly entered this field of observation, and the prospects are rich for the development of pathological

physiology. But, almost without exception, these experiments and observations have been confined to the single phase of the circulation problem involved in the *arterial blood pressure*.

Pressure within the capillaries determines largely tissue nutrition, and pressure within the veins regulates the return of blood to the heart; and though these fundamental values may, under given conditions, be more or less quantitatively predicted by known variation of the factors which regulate arterial blood pressure, the practical problem varies widely from the theoretical one. To the pathologist and the clinician the problems involved in the venous circulation are of more importance, possibly, than those embraced in the arterial blood flow.

For its proper function a tissue demands just as active a removal of venous blood as it does supply from the arterial stream. Passive congestion of organs resulting from more or less venous stasis is admittedly at the bottom of a large number of the "functional" disorders which we are called upon to treat. Balfour (1) quotes with approval the statement of Gairdner that "Venous congestion is the first condition essential to the formation of the gouty diathesis." Nothing in therapeutic manipulation is more magical than the amelioration of certain conditions in pneumonia, produced at once by venesection. This procedure was formerly advised only for cases presenting vigorous reactive powers and high arterial blood pressure. But now we know that bleeding is especially indicated, not to save the left ventricle, but when the right side of the heart is so surcharged as to threaten paralysis and when the soluble poisons of the blood are damned up in the brain. The look of intelligence which lights the face of the comatose patient when some ounces of blood have been withdrawn can hardly be due to anything but the relief of his nerve cells from a numbing anesthetic as the blood containing it finds a free way to the heart. There are good reasons for believing that cardiac

dyspnœa, whether due to exertion in the normal individual or resulting from uncompensated lesions, is, in the great majority of cases, due to strain of the right side of the heart. It has long seemed to me that death itself is, in the great majority of cases, determined by cardiac failure, not of the tissue feed-pump, the left ventricle, but by paralysis from over-distension of its pulsatile reservoir, the right ventricle. There are good reasons for believing that venous blood pressure increases with elevation above sea level, and that many of the vital phenomena incident to high altitudes are thereby explained. Even among physiologists the venous circulation has received very meager attention. Observers seem content to deduce the hæmodynamics of the veins from known conditions in the arterial system. Thus, it is easy to demonstrate that when peripheral resistance is decreased by dilatation of the arterioles the venous pressure rises and the general arterial pressure correspondingly falls. When, on the other hand, arterial pressure rises owing to vaso-contraction, venous pressure varies in the opposite direction. Yet how often at the bedside have we to consider the combination of a high-tension pulse with overgorged veins! In order to understand the blood flow in the veins it is necessary to consider at the outset the various factors involved in the problem, and our conceptions must at present be deduced from known physical laws rather than founded on direct observation. Thus, it may be taken for granted that increase or decrease in the pressure of blood at a given point in any vein, is determined by the ratio of the volumes of the afferent and efferent streams in a unit of time.

The amount of blood entering a vein depends on the general arterial pressure combined with the state of peripheral resistance in arterioles and capillaries. The outflow from the vein, as from the artery, depends upon a peripheral—in this case a central—resistance in which are combined the variables. 1. Gravity, or height of the blood column to be lifted; 2, the cross-

section of the veins between the point observed and the heart; 3, the resistance, negative or positive offered to the flow of blood into the heart itself. Other elements of resistance such as varied elasticity of the vein wall, need not be considered here.

The *rate of blood flow* in a vein depends upon the ratio of venous pressure to central resistance. Apparently the highest venous pressures which we have to deal with clinically are in cases suffering from abnormally sluggish circulation due to positive obstruction to blood flow within the heart. The only method known to me which has been suggested for estimating venous blood pressure in man is that recently devised by Gaertner. According to this observer, whose original paper I have not seen, if the hand is lifted from a dependent position the veins on the back of the member will gradually diminish in prominence and finally disappear when the hand is raised to a greater or less height above the level of the heart. This height is assumed to measure the pressure of blood within the right auricle. Such an observation, so simple in description, is not easy to carry out with exact results and the procedure does not seem to have come into general use.

The method which I have ventured to bring before you depends upon a simple and familiar fact. Suppose you occlude one of the veins on the back of the hand by the pressure of a finger tip of the other hand and then wipe out the blood from the vein central to the point of pressure; the vein will remain empty as far as the first valve which guards the back flow into it. When the finger pressure is gradually relaxed, at a certain instant the blood will rush in from the periphery and refill the vein. It occurred to me that, using an appropriate instrumental device instead of the finger to occlude the vein, one might be able to measure the pressure which is just sufficient to send the blood past the obstruction, and that this would be the venous blood pressure at that point. Such a method I desire to describe and, with due

elimination of instrumental and observational errors, I venture to hope that it will serve a useful purpose in the development of truth.

Method. In the procedure first employed it was sought to represent the venous blood pressure directly in terms of a column of water or mercury. To this end an instrument was devised consisting of a small brass tube about one and three-quarters inches long and one-third inch in diameter sliding in and projecting from an outer tube. The corresponding end of each tube was sealed with a thick piece of metal and a screw threaded through the plug in the outer tube entered, but did not quite penetrate, the thick plug sealing the end of the inner tube. By this means the inner tube could be made to move to and fro within the outer. A brass tube about one-fifth inch in diameter and one inch long was soldered at right angles into the middle of the inner tube, and the outer tube was slotted to accommodate its motion. The open end of the inner tube was closed by a fine membrane tied in a groove near its edge. The membrane finally adopted was the ordinary peritoneal tissue moistened with dilute glycerine. The cap of membrane was made quite loose so as to bulge out when air pressure within the inner tube was raised. It was by pressure of the distended membrane directly upon the vein that blood flow in the latter was occluded. To facilitate description this mechanism will be referred to as the "hæmostat."

Another essential part of the apparatus was a four-way small brass cannula whose middle piece was perforated by a screw vent valve. Two limbs of the cannula were connected by rubber tubing, respectively, with a mercury and water manometer having their zero points at the same level. Another limb was jointed by a rubber tube to the side-tube of the hæmostat, and the remaining limb was provided with a rubber tube ending freely and closed by a pinch-clamp. In order to make an observation the hæmostat was held with its long

axis vertical in a burette clamp, carried on an upright rod, which clasped the outer tube. With the hand resting prone upon a table the open end of the hæmostat, guarded by a membrane, was adjusted by the screw motion to a chosen vein just lightly enough not to occlude blood flow within it. The end of the free rubber tube of the cannula was now placed between the lips and the air pressure within the apparatus was raised to something greater than the blood pressure. The pinch clamp prevented the air from escaping. The membrane of the hæmostat was thus caused to bulge and press upon the vein, which remained empty when the blood was wiped out of it by the stroke of a finger or of a fine rod. The screw of the vent valve in the cannula was now slowly turned, releasing the air-pressure, until the blood in the vein began to pass the obstruction offered by the relaxing membrane. The manometers were then read and the results recorded. In practice the mercurial manometer was found quite unessential, its use is not advised.

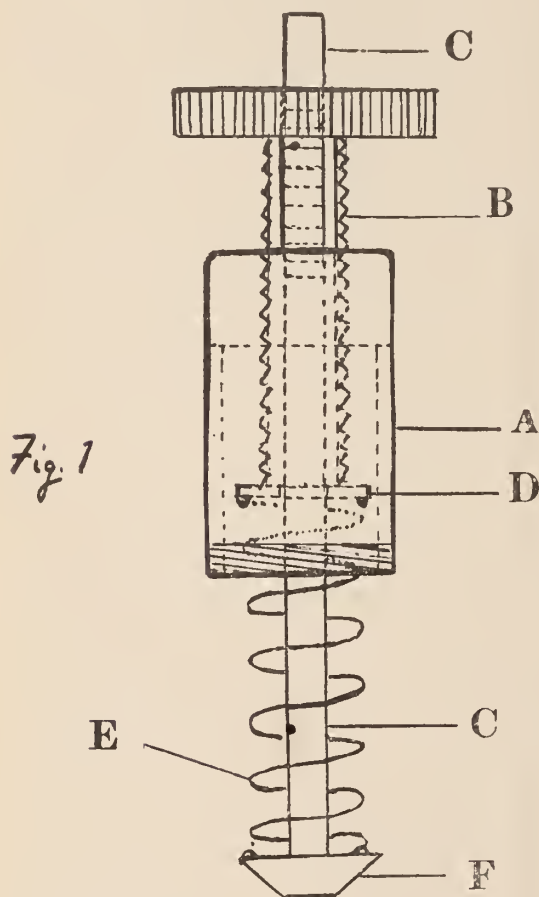
The successive observations of a series agreed so nearly in their values as to certify to the essential trustworthiness of the method. One important instrumental error more or less invalidates the accuracy of the manometer readings in that these represent a certain tension of the membrane in addition to the true blood pressure values. This error is less marked the closer the contact of the rim of the hæmostat tube with the vein. The foregoing apparatus is fairly well adapted for laboratory experiment, but is too cumbersome for ordinary clinical use. It was therefore sought to devise an instrument which might combine accuracy with portability and simplicity. The result is the device represented in the drawing (Fig. 1) from instruments made for me by the Flint-Lomax Company and later by Wm. Jones of 1426 Stout Street, Denver. The impulse has been resisted to call the instrument a "hæmodynamometer" and it will be referred to as the "*Spring blood-pressure gauge.*"

A brass cylinder (a), one-half inch in diameter and seven-eighths inch long 1, is plugged at one end to the depth of one-fourth inch to afford broad bearing to the steel screw (b) which passes through it and which is long enough to have a movement of about three-fourths inch. The screw is bored through the centre for the passage of the piston rod (c). The lower end of the screw (b) is swivelled to a

small eyelets which serve to support a spiral spring (e) made of fine steel wire. The other end of the spring, which when without tension is nearly one inch long, runs through similar eyelets in the upper surface of the aluminum pressure button (f). The length of the spring and hence the zero-point of the scale, can be adjusted by screwing it into or out of the eyelets. The aluminum rod (g) is screwed into the centre of the pressure-button and passes up through the hollow screw (b). Whenever the disk (d) and the pressure-button (f) are approximated the tension of the spring varies proportionately and the piston rod (c) projects above the head of the screw (b). The screw has twenty threads to the inch and a half-inch of the upper portion of the piston rod is ruled in ten divisions. When the spring is not in tension the upper mark on the rod-scale is level with the top of the screw-head. If the cylinder (a) is held fixed and the bottom of the button (f) rests upon a table, one complete revolution of the screw causes the piston to rise through one division of its scale. The screw head is made purposely large (nearly three-fourths inch in diameter) for its periphery is divided into ten spaces, numbered to the left. In the instrument here shown the tension of the spring caused by raising the pressure-button represents a pressure of about 13.5 grams for every division on the piston rod or 0.35 gram for each division on the screw head.

In carrying out my observations the cylinder (a) has been held in a burette clamp with the pressure button (f) resting on the vein to be investigated; the vein is occluded either by turning the screw to the right or lowering the clamp. The vein is then emptied and the tension of the spring released by turning the screw to the left.

When the vein investigated is devoid of a valve, the back-flow of blood can be prevented by pressure of a finger tip. When a vein is large and tense and rolls from under the pressure-button, it can be emptied and flattened before applying the button.



X 2

small disk of metal (d) three-eighths inch in diameter, which, of course, moves to and fro with the motion of the screw, but is prevented from revolving by two projections from its periphery which move in slots let into the inner surface of the cylinder (a). From the periphery of the under surface of the disk (d) project four

The moment blood enters the vein the amount of pressure is read off on the scale. In practice I have found that estimates from the graduations on the piston rod to be sufficiently accurate. As the burette clamp with its special support is cumbersome to transport, I am employing instead a device shown in Fig. 2. It consists of a ring of brass, into which can be slipped the cylinder (a) and held by a friction-screw. Soldered to the ring are two legs of flexible sheet brass, having broad feet which rest on the part to be investigated and support the whole apparatus. The arched form of the brass feet allows their application to

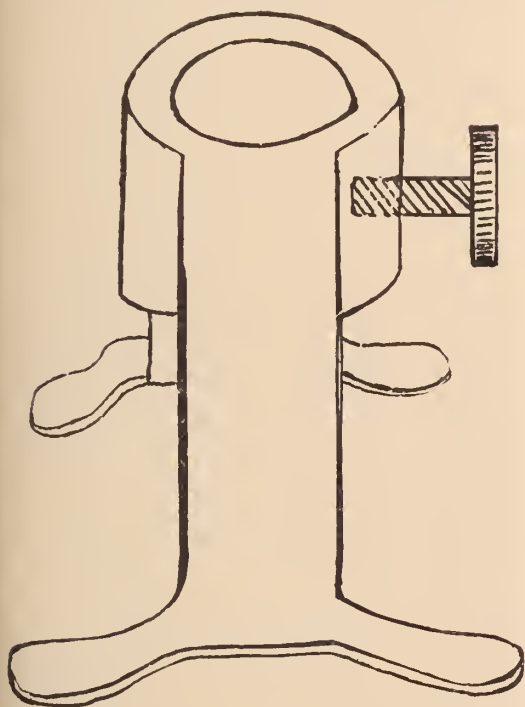


Fig. 2.

the surface in a variety of ways without occluding the vein.

Finally, to protect the spring of the instrument when it is not in use, a metallic cap is screwed over the open end of the cylinder (a). The instrument may easily be carried in the vest pocket.

Instrumental errors. Friction of the piston rod on its bearings at the top and bottom of the screw is apt to cause a displacement of the zero point on the rod when the tension of the spring is slowly released. It is only with very slight pressures that the proportion of error becomes important.

In order to obtain comparable results from different veins it is necessary to consider the shape and size of the pressure button and the character of the tissue underlying the vein. If the button is flat on its under surface and overlaps the vein to which it is applied, compression of the vein involves, of course, more or less compression of the skin in which it is buried. The instrumental reading is, then too high in proportion to the amount of resistance offered by the skin to obliteration of the vein. Again, if comparative measurements are made of the pressure in the same vein according as it runs over a foundation of bone or of soft tissue, considerable difference will be observed for the reason that in the latter case the wall of the vein must be stretched and tissue underlying it compressed before the vessel is occluded. The pressure button which gives best results has the section of the frustrum of a cone whose flat top has the diameter of about one-eighth inch. The best comparative results are obtained from veins closely underlaid by bony tissue. The most convenient vein for investigation is one on the back of the hand where it runs upon the head of a metacarpal bone. Another suitable vessel for study is the large vein which curves over the edge of the radius some three inches above the wrist. To obtain accurate results, an unyielding foundation for the vein is more important than the size or shape of the pressure button; in fact, the latter factors make little difference except when the vein rests on soft tissue.

Discussion of Results. It is not intended in this paper to detail at length the results of the rather limited number of observations I have thus far made. The method of Gaertner, referred to above, is

claimed by him to disclose the pressure of the blood in the right auricle; that is, the positive or negative resistance offered to the inflow of blood, *vis a fronte*. The method here described measures the force distending the veins, *vis a tergo*, of which auricular resistance is but one factor. If it were possible to measure the rate at which the emptied vein refills on releasing pressure intra-venous tensions could easily be compared.

Nothing is more obvious as an outcome of this study than the great variations of pressure to which the superficial veins are subjected in the same individual. The most notable influence determining the condition of the surface veins seems to be air temperature. On a cool day the contracted vein on the back of my hand may be occluded by a pressure of one gram, though to obtain the same result when the vein is distended on a warm day requires a weight of three or four grams. It is to be presumed that the pressure of blood in the internal veins varies inversely to that in those on the surface.

I was surprised to find the blood pressure in the large vein crossing the radius to measure three or four times as much as that in the hand vein. That this result was not due to instrumental error was shown by the wide variations of pressure in both veins following the state of skin circulation. As far as observed, in veins of the same size the blood pressure is higher in that which fills most rapidly after being emptied. The changes of blood pressure to which a vein is subjected under varied conditions are readily measured. Thus, when the hand-vein is weighted by a pressure just sufficient to occlude it, and then emptied, the vein soon refills under the increased blood pressure caused by contracting the expiratory muscles with glottis closed.

The physiological and pathological relations of venous blood pressure as they may be disclosed by study with the Spring blood-pressure gauge, can not be discussed

until many new observations have been gathered.

OCULAR INJURIES.

BY MELVILLE BLACK, M. D., DENVER.

A comparatively slight injury to the eye may, through neglect, result in the loss of the function of this important organ. A very serious injury, which would surely prove disastrous, if neglected or faultily managed, may be so treated in the beginning as to cause but slight impairment of vision. It is upon these two points that I shall ask your indulgence for a few moments.

In speaking of simple injuries to the eye I shall not include injuries to the eyelids. I shall speak only of simple wounds of the cornea and conjunctiva and chemical and actual burnes of these structures.

Simple wounds of the cornea and conjunctiva may be inflicted with sharp or dull instruments or from flying particles of foreign matter. Contused wounds of the cornea from blunt instruments are usually more than simple corneal wounds, because the force of the blow may inflict injury to the interior of the eye. Every wound of the eye calls for rigid aseptic precautions. The eyelids, adjacent skin and eyelashes should be carefully cleansed. If the corneal wound contains a foreign body it should be removed, and care taken to also remove any burned or necrotic tissue from this area. In operating upon the part care should be taken not to inflict any more traumatism than is absolutely necessary. It is to be remembered that wounds of the cornea extending through Bowman's membrane leave permanent scars. While this scar may be insignificant in size it may be the cause of an irregular astigmatism that badly damages vision if it is located in the central corneal area. Simple incised wounds and scratches of the cornea should not be molested, except to smooth out misplaced flaps, unless they are infected. In this event they should be wiped clean with

cotton wound tightly upon a tooth-pick with clean fingers, and then painted lightly with pure carbolic acid upon a similarly cotton wound tooth-pick. As an additional precaution the conjunctival sac may be filled with five per cent. iodoform vaseline or 1-3000 bichloride vaseline.

No matter how simple a corneal wound may seem to be, it may prove most complicated if it becomes infected, and this is not nearly so impossible as some physicians seem to think. In order to avoid it the outside of the lids and the lashes must not only be rendered clean, but must be kept clean until the wound has healed.

The eye should be closed with a dry or moist bichloride dressing. If the eye proves especially painful, the dressing may be removed and iced cloths applied until the pain is relieved. After this the iced cloths may be continued or the dressing re-applied.

This, no doubt, sounds like a rather extensive treatment for so simple a thing as a foreign body on the cornea. But I assure you that if you saw the number of damaged eyes from infection of these simple wounds which I see, you would fully agree with me that precaution is necessary. The patient, usually, does not care to take any chance, and if it is explained to him that there is danger unless these precautions are taken, he will readily consent to the inconvenience of having the eye closed until the wound is healed. Usually wounds from foreign bodies, and corneal scratches will heal in from 12 to 18 hours. If the eye remains sensitive to light, or the wound stains with fluoresceine or methylene blue it is not healed.

Burns of the eye. I shall only give passing notice. It should be remembered that oil, above everything else, is the one thing to use in a burned eye. Its use should begin as soon as possible after the burn and continue indefinitely in the after treatment. Castor oil is my preference. Olive oil, if pure, is satisfactory, but I have so frequently found that it causes

smarting, that I now prescribe castor oil because it causes no inconvenience. Any bland oil which is at hand can be used in emergency, until something better can be obtained. Any foreign particles, such as lime or hot metal, should be removed at once, but get the oil in first if it is at hand. Owing to a tendency to the formation of adhesions between the ocular and palpebral conjunctiva the greatest care and ingenuity must be exercised to guard against them. Despite all efforts symblepharon may form and later on demand plastic operations for its correction.

Conjunctival wounds, except burns, usually heal kindly. Infection of such wounds is rare because of the free blood and lymphatic supply.

We now pass from the consideration of simple wounds to the more serious *penetrating wounds of the eyeball*. The endeavor should be to first get a clear history of how the injury occurred. If the eye contains a foreign body it is important to know if it is rock, iron or some non-magnetic metal, such as copper or brass. After rendering the outside of the eye and the lashes clean, the appearance of the eyeball is noted, and the vision of the eye roughly estimated. Any loose foreign bodies or shreds of blood should be removed from the conjunctival sac. The point of entrance, the direction and possible depth of the wound carefully made out. Do not use a probe for this purpose; it is a dangerous instrument.

If the anterior chamber has been opened the iris is likely to be found caught in the wound, and if it can not be pushed back into the anterior chamber and made to stay, it should be grasped with forceps, pulled slightly out and excised. The cut edges can then be pushed into the anterior chamber where they will remain.

If the lens is opaque it means that this structure has been injured and that it may swell and give further trouble.

Every endeavor should be made to combat infection. In my opinion this is best

accomplished by the constant application of iced cloths. Even if the eye is infected, if its temperature is kept low for the first few days after the injury, the activity of the germs carried into it becomes lowered, and they may finally become innocuous. If the precaution were always taken, by the physician first called, of cleaning up the eye and then applying iced cloths until expert advice could be obtained many a useful eye could be saved. If I can make this one point strong enough, *iced cloths for the prevention of ocular infection*, I feel that this paper will have served a valuable purpose.

The physician can often materially assist the oculist to whom a case may be referred by giving the latter a full account of the history of the injury and an accurate picture of the appearance of the eye as seen shortly after the injury. If there is any question about an eye containing a foreign body an X-Ray picture should be taken by an expert in radiography. If the eye contains a chip of iron or steel it should be first located by radiography, and then be removed by an expert with the giant magnet or hand. It is very important that an eye containing a foreign body should be seen early by an oculist, if he is to see the case at all. A few days' delay and it may be too late. I have frequently had cases referred to me a week or more after the injury which, I believe, could have been saved if the foreign body could have been removed within 48 hours following the injury.

Atropine is strongly indicated in all penetrating wounds of the globe as well as in all infected simple wounds. In the case of ocular burns alkaloid atropine may, by the use of heat, be dissolved in the castor oil.

In closing I want to say, as I have said in several papers before, *cocaine is not a remedy*, and under no circumstances is it to be used in the eye as such. It is a local anesthetic pure and simple. The use of cocaine in the eye to relieve pain is absolutely contraindicated because the relief it affords is only of a few moments duration. If its instillation into the eye is repeated often enough to prolong this effect, in a short time it ceases to produce any anesthetic action whatever. In the mean time the corneal epithelium is all destroyed, nature's healing process is arrested and the possibilities of infection greatly increased. In short, it serves no good purpose and may do a great deal of harm.

DISCUSSION.

Dr. Bane: As to the benefit of cold applications in preventing infection, I doubt their efficacy. They certainly do relieve by keeping down the congestion and pain. But if the eye has been infected it will be manifest later whether ice cold applications have benefited or not.

Dr. Chase: I did not hear the whole of the Doctor's paper, but two points I think deserve the attention of us all, whether specialists or engaged in general practice. One is the matter Dr. Bane just spoke of—cold compresses. I do not use them very often, for I find it difficult to maintain the cold unless the patient is in a hospital and a good nurse in constant attendance. If the cold compresses are not kept cold they act as a poultice and you have brought on the very condition you are fighting against—the cloth becoming warm and acting as a poultice furnishes a fine breeding ground for microbes with which the eye abounds. In this connection I want to mention the tying up of an eye from which a foreign body has been recently removed. We are confronted with this fact, it is utterly impossible to secure cleanliness of the eyelids. The eye is a

dirty organ. If you have used the greatest precautions known to science the eye is still a dirty organ, always having germs enough present to produce serious trouble. Now you have removed a foreign body from the cornea, and, having washed the eye with bichloride, or any other approved antiseptic, is it not wiser to secure cleanliness by frequent irrigation, to keep as many of the microbes out of the wound as possible, than to bind the eye up? I usually follow this method myself, and in order that I may have freedom from germs for a little while in that wound which has been made fresh by removing a foreign body, I pack wound with dry boric acid, and I know that for a time I have an antiseptic solution on the eyeball. I urge that method upon my students. I am sure with a large number of patients I get better results than I do in tying the eye up. I also try to urge upon the students the point that Dr. Black brought out—the danger of simple wounds to the cornea. I am sure that thousands of eyes have been lost from simple wounds by infection which have been treated carelessly.

Dr. Boyd: It is a fact that has often been proven by the carelessness of the general practitioner that the power of resistance of the eye to infection is very great. It has also been proven pretty often by the general practitioner that where improper treatment has been pursued in the early hours that the eye very quickly goes to the bad when infection has once taken place. From my own experience I can not agree with Dr. Bane, because in severe injuries to the eyes I have found that the reaction which would naturally follow injuries is almost nil when ice cloths were begun early and attended to properly. I agree with Dr. Chase, that properly applied and assiduously attended to, we will have scarcely any sloughing of the eyelids from foreign substances, etc., and where we have puncturing wounds of the cornea and sclera I agree with the essayist that the best mode of combatting infection is by the use of ice application.

Dr. Bane: May I correct a wrong impression as to the use of ice-cold applications?

Certainly the cold is indicated in keeping down inflammation. My point was that they would not stay infection; if infection had occurred it would manifest itself later even though ice-cold applications be applied properly.

Discussion Closed.

Dr. Black: I think Dr. Bane misunderstood the position probably of Dr. Boyd and myself. The intention of using ice cloth is to prevent infection more than to allay it after it has once begun. The ice certainly can do no harm, because it is a well recognized fact that the streptococcus germs do not grow readily in the presence of low temperatures, and it therefore can only do good even if infection is present. It certainly is a demonstrable fact that it will prevent infection by keeping the temperature of the eye lower for a reasonable length of time. Dr. Boyd probably has a larger experience in the treatment of ocular injuries than any other oculist in the state, and it was through his urging, in the the beginning, that I endeavored to have every one of my patients with ocular injuries use ice as early as possible, and I certainly have been more than gratified with the results. As to the difficulty of getting it carried out, I have never had any trouble. The patient must have it explained to him that it must be carried out effectually, and the method of carrying it out effectually is that these iced cloths must be changed at least every minute. That must be impressed thoroughly on his mind. As Dr. Chase contends, the cloths even warm act like a poultice, and are the worst things that can possibly be used, and this must be thoroughly explained to the patient. If you just tell him to make ice applications the Lord knows what he will do. But it must be explained that these things must be changed constantly, oftener than once a minute if necessary and keep it up steadily. The question of leaving the eye open after the removal of a foreign body is one that has been under considerable discussion of late. There was a paper brought from one of our prominent confreres of Europe recently upon this point, in

which he maintained that it was a great mistake to close the eye after the removal of a foreign body, that the movements of the lid over the cornea and the movements of the ocular fluid all tended to prevent the cultivation of germs in the conjunctival sac, and it was probably due to this that the eye was so frequently immune to infection—that a germ does not grow rapidly in moving fluid. But practically, however, I do not find that my patients are so comfortable if they are allowed to go away from the office with the eye unprotected. The closure of the lids, it is true, will confine any germs which are in the conjunctival sac, but the movements of the fluids are practically the same from the fact that the eye moves constantly with its fellow, so that the actual movement of fluids in the conjunctival sac is not dependent upon the eye being open; but it does make some difference if that lid is sweeping up and down over the cornea all the time and the patient is constantly rubbing it, oftentimes with soiled fingers. The eye-lashes are the receptacles for these germs, and they are the more readily rubbed into the eye with the eye open than if it is closed. This author also contended that the temperature of the eye was raised by placing the bandage over it, and the temperature was lowered by exposure to the external air, and he went on to give the relative temperatures with the eye closed and with the eye open, and he maintains that this point is one which is important in that it tended to prevent the cultivation of germs if the eye was low in its temperature. But, as I have just said, the comfort of the patient is one of the principal things, and I always tell the patient if he is not comfortable with this bandage on to take it off and apply ice cloths until he is comfortable. After he is comfortable then the bandages can be replaced. I see no good reason for allowing these patients to walk around with their eyes open, and I certainly have seen many such eyes become infected, whereas in my own practice if I have been the first to see the case and treat it infection has not been a sequella.

MEDICAL LAWS AND THE INFLUENCES THAT MOULD THEM.

By S. D. VAN METER, DENVER.

PART I.

MEDICAL LAWS.

Within the range of the subject "Medical Laws" very properly may be included many different statutes, but for the purpose of this paper the subject will be confined to laws regulating the practice of medicine. These statutes, while apparently simple enough in their phraseology, present many phases of delicate construction and application; and few are they who realize their full purpose and understand their operation until they have had experience in their administration. I will, therefore, in the short time allotted, attempt only to touch upon certain salient features and defects of our medical laws in which the profession should take deep and continued interest if they are ever to be understood and corrected. It hardly seems necessary to state that the one purpose or object of these laws is to protect the public health by regulating medical licensure on the basis of an educational and moral qualification, the standard of which will insure the proper care of the sick and injured. However, it is necessary to call attention to this point, because there is a feeling among the laity that the medical law is a "union" measure, and I am sorry to admit that not a few of the medical profession entertain the

same idea. It is true that medical registration laws may have many indirect influences, but these must not be confounded with their one direct purpose as stated. Chief of their indirect results may be mentioned the satisfaction the medical profession derives in seeing the charlatan curtailed in his nefarious work, or perhaps driven from the profession entirely. Then it gives all honorable members of the profession pleasure to know that suffering humanity is in a measure guarded against these human vampires. Further, it increases one's pride and respect for his chosen profession to see its standard raised by the expulsion of dishonesty, ignorance and incompetency from its ranks. As the one problem in medical legislation is that of maintaining a uniform educational standard as a basis of licensure it can not be too strongly stated that until the profession, the legislators and the public can be educated to the point of realizing that the state, through the medium of the medical law and its administrative board, must as a safeguard to the public health, fix a uniform educational standard for all men and women engaged in the healing art irrespective of school or pathy, there exists a great danger of lowering the standard of licensure by the enactment of laws fixing different standards for the various schools. The dissensions in the profession and the ignorance on the part of the laity as to what should be, will allow that false doctrine, the progeny of the sciolists, which was conceived in iniquity, born in sin and is now being nurtured and reared by its infamous parents, and which teaches that it is not necessary for the practitioners of one school to possess as much education as another, to displace the keystone of the the uniform educational standard for all supporting arch of our present law, viz., practitioners.

Historically, laws designed to regulate the practice of medicine are coeval with the earliest records of medicine, but for the study of modern medical laws, es-

pecially Anglo-American, we can afford to begin with the passage of the English Medical Practice Act, inasmuch as all of our statutes have that legislative measure as their foundation.

The inconsistencies of many of our state statutes have periodically brought forth advocates for a national law regulating the practice of medicine, and undoubtedly had our form of government been so arranged as to permit of such a system of medical licensure, it would be a great improvement on the regime in vogue. However, when we adopted our National Constitution the control of the professions was not delegated to the Federal Government, and in consequence remained within the police power of the states. Therefore, it would be necessary for the states to relinquish their rights to the Federal Government before any Federal statute regulating the practice of medicine could be made legal; which, while possible in itself, would establish a precedent in legislation, the very suggestion of which would nip the attempt in its very outset. The old question of state rights would be immediately raised, and we all know how wise it is to let that subject alone. Among the first states, if not the first, in this country, to take the initiative in the passage of a medical license law, was New Jersey. Following in her footsteps, other states soon enacted similar laws, all having for their object the regulation of practice upon a satisfactory assurance to the state of the practitioner's educational qualifications. The problem of what the standard should be, and how it should be ascertained by the body delegated by the state to be the judge thereof, was then, as it is now, a perplexing one. Society membership, possession of a diploma, examination upon the several important medical subjects, licensure in other states and countries, and a combination of all of these standards were adopted and tried in turn. Today we have the majority of the license boards following the method of universal, uniform written examination. In addition

as prerequisite to application, most boards insist upon the possession of a medical diploma from a school which has ostensibly enforced a curriculum of study fixed by the board, and required of all students certain preliminary courses of instruction as a *sine qua non* to matriculation. It does not require much investigation to see how deficient this method is, if any regard is made for equity and justice to all classes of applicants. The natural inference would be that it must be the best method or the majority of boards throughout the country would not have adopted it. A little study of the subject reveals that universal written examination of applicants is the easiest way for a board to get through their work. It enables the board to reduce its labors to almost a mechanical process, wherein but little mental effort is expended, and very frequently the question lists and grading of papers are left to clerical assistants. This opportunity of relief from hard labor, which the careful consideration of the question involves, is the chief explanation of why the method has been adopted. Were it supplemented by the boards taking into consideration the examinations made by other boards, many of the objectionable features of the method would be removed, but as nothing is ever settled until it is settled right, other features of this common method which are wrong will in time, of necessity, be changed. Very little objection could be raised by recent graduates in being required to take a rigid State Board examination, but it need not be repeated by every board to whom they apply for license. However, no sane person can maintain that it is necessary to require written examinations of graduates of many of our best schools to enable licensing boards to decide as to their educational qualification as applicants. Furthermore, it is perfectly plain that a statutory provision making it mandatory on the part of a board to examine by the written method all applicants, irrespective of past record, age or years in

practice, limits the discretionary power of the board—amounts to an insult to the judgment and integrity of its members, and makes their duties clerical, instead of quasi judicial—as they should, and must be, if the proper administration of the law is to be expected. The injustice and inequity of the universal examination method fall hardest upon the old established practitioner, who, for reasons of necessity or choice, wishes to make a change of residence. Experienced and well qualified as a physician and surgeon, he is in no way prepared to stand the test of qualification as offered by the average state board written examination. To obviate the injustice of the method to the established practitioner, some good intentioned earnest workers have labored hard and long in perfecting the intricate detail of the scheme of so-called reciprocity in state licensure; well intended, but so burdened with nullifying provisos that it is no wonder it has not accomplished more good than it has. Nearly all of these reciprocity sections provide that the license board operating thereunder shall not accept the license from another state as evidence of educational qualification, unless the state granting the license accept their certificates, no matter how high a standard the other state is known to maintain. The injustice to the applicant who has qualified is not hard to see. He is made to suffer for the shortcomings of the board and statute of the state whence he hails, by the board before whom he stands as an applicant for license. Such retaliative measures would hardly be expected in a liberal profession.

The proper solution of this vexatious problem of standard and method of determining whether an applicant possesses qualifications equivalent to the adopted standard is approached, if not fully accomplished, in the method made possible by the recent amendments to the Colorado law, and now administered by our Board of Examiners. In brief, the Colorado method is to allow any one, graduate or undergraduate, to make application for

license. An applicant is requested to give a full, but concise, history of himself from birth up to the time of making application. In this history is included preliminary and college education, service in hospitals or like institutions, years and location of former practice, army, navy, marine or other government services, society memberships, professorships, post graduate courses, licenses in other states and countries, and any other data that would be of assistance to the board in deciding whether or not the applicant possesses educational qualifications equivalent to the standard adopted—which is, and always must be, that which guarantees safety and protection to the public health. With such data duly authenticated the board does not have much difficulty in disposing of the majority of applicants, although it must be admitted that the labor attached to the authentication of credentials requires the expenditure of much time and painstaking investigation. Should the credentials offered be insufficient to convince the board of an applicant's qualification, he is examined, first orally and clinically, and the following day voted upon by the board in session. Should an applicant fail to receive a majority of votes, he then is required to take the written examination, which is again made and graded by number, and if an applicant secures a general grade of seventy per cent. or better, he is considered to possess the qualification entitling him to a license. In addition to these tests of educational qualifications, our board requires the affidavits of two reputable practicing physicians as to the moral character of each applicant. I am sorry to say that many physicians are too careless in giving these affidavits, so that our board has been compelled to carry on an additional investigation as to the moral character and past record of applicants, as a further safeguard against licensing men qualified in an educational way, but who have forfeited their right to any claim of good moral character.

It will be noticed immediately that our method of administering this most important part of a medical registration law permits us to use any legitimate means of ascertaining a knowledge of an applicant's qualifications, and allows a board to use that method or those methods applicable to the case in question, and insures the administration of an equity impossible by any one method. The only fault found with this plan is a fear on the part of the uninformed that a board will abuse such wide discretionary power. In answer to such opposition it is sufficient to say that if you start with the suggestion that the members of your board are dishonest and unscrupulous you might as well go no further because the law can not be drawn that will accomplish aught if administered by such a board.

Another defective feature often incorporated in medical laws requiring universal uniform written examination is that of insisting upon certain preliminary education and a diploma of a recognized school as a prerequisite to admission to examination. These requirements are right and just so far as determining the qualification of applicants is concerned, and no board should, except in rare instances, consider an applicant qualified who does not possess such credentials. Nevertheless, it is a serious mistake to insist upon them as prerequisite to application. Nothing in particular, except the labor of investigation or examination, is saved thereby, while much is lost in the way of sacrifice of prestige with the public and the control of the very class, viz., the irregulars, the very people upon whom medical boards should expend most of their time and energy. The members of the profession who make an honest effort to equip and qualify themselves need but little regulating. The men who are trying to get a legal standing without making any effort to qualify themselves are the people for whom the law is most needed. To refuse the votary of any *pathy* the privilege of applying for a license because he

has not received an M. D. immediately places that individual in position of advantage when arraigned in court for illegal practice. Specious though the stand may be, his plea that he is qualified, and stands ready and willing to show his qualifications, but the statute and board administering it will not allow him such opportunity until he has pursued a course of study he claims he does not believe in, is a hard one to overcome when arguing to the average court or jury. Further, this same unnecessary provision gives the irregulars their greatest foothold when trying to secure separate laws regulating their special pathy, because our legislators must be expected to listen to anything which can be made to sound unfair or oppressive to any class. If the disciple of any cult can show that he is not allowed to apply for a license in any state until he has taken the course prescribed and taught by another school or schools, right then and there he is going to have a fair opening toward securing separate legislation, which, when enacted, gives him equal legal standing with the oldest and best established practitioner in the state. Too much stress can not be laid upon this point as a salient defect of many of our medical laws, but I am happy to say that it, nor the foolish provision of examining upon materia medica and therapeutics, does not exist in Colorado, nor do we have separate regulation of the different pathies—as obtains, to the discredit of medicine and the disadvantage of the people, in many of our states. Could the original plan, as was first adopted in many of the states and exists still in Alabama and North Carolina, of the state delegating the full control of practice to the State Medical Society, have been continued it would have been fortunate, as the conditions (the shortsighted school jealousies) that led to its abandonment will soon be removed. The knell of sectarian medicine, so far as the administration of registration law, where it never had any place, has been rung, and to a great extent has been made

certain through education and its development of liberality. Osler sounded the pulse of the profession when he penned the following:

"It is now time that the homeopathic brethren were coming into the fold. It is now long past the time when a difference in drugs should separate men with the same hope. The homeopaths are awake, but they must realize the anomaly of their position. The original quarrel is ours, but they should not allow themselves to be separated by a shibboleth that is inconsistent with their practice today. And the rent in the robe of Esculapius is more greivous in this country than elsewhere in the world."

We may live in hopes that the day is not far in the future when the rent in his robe shall be repaired and a spirit of consideration replace that of intolerance and abuse—sharp edged tools that they are, but which are of no use in the field of diplomacy or in settling disputes.

Had the regular school pusued a different policy toward the followers of Hahnemann when he announced his law of *similia similibus curantur*, homeopathy would never have gained the foothold that it did. A policy of consideration and a willingness to admit that others have a right to their opinion would not have prevented a careful investigation of its claims and the exposure of the fallacy of the law. The case with which scientific investigation proved the falsity of the three fundamental tenets of Homeopathy did not prove that nothing good could come of it. The fallacy of those tenets can not be better pictured than they were years ago by that master mind, Oliver Wendell Holmes, yet it has taken all these years to wear away the sharp edges of bitterness so that the regular school will honestly admit that, if nothing more, Homeopathy illustrates that the sins of omission are no worse than those of commission—that with all of the scientific absurdity of high potencies and infinitesimal dosage we owe to them a debt of grat-

itude for being the chief factor in bringing about a revulsion against the nauseating poly-pharmacy then practiced by so many of the old school. It taught us the lesson that all diseases have a tendency to get well if left alone; that it is far better to give no medicine than to burden an already overtaxed constitution with nauseating mixtures, hoping that some ingredient might do good.

With the hopeful signs that sectarian medicine is soon to be a thing of the past, and the profession will be composed of educated men of tolerant and considerate mien toward those who may differ with them upon mooted points, we may expect to see state society control of the licensing bodies reinstated. The medical society of the near future, composed as it will be, of men of education and well trained in the science and art of medicine, but in many instances holding decidedly different views on therapeutics, will be far better qualified to select the personnel of the administrative board than the State Central Committee of the political party which happens to be in power. Until we have such a society it must of necessity fall upon the several state societies to exert their efforts in trying to secure the best men possible for membership on the State Medical Licensing Board. I believe in composite boards, as when the statute is so drawn as to render it unnecessary to raise sectarian questions it becomes a great school for the members of different therapeutical beliefs to learn that the other man is just as earnest as he in raising the standard of medical education. The history of separate sectarian boards, their jealousies and their ineffective administration of medical statutes, are interesting, but rather disgusting to the lover of harmony and good common sense. The policy of appointing a board for each school of medicine was the outcome of petty school jealousies, which could all have been averted had the state refused to recognize any school, and adopted the plan of not requiring an examination upon the sub-

jects of *materia medica* and therapeutics. The rapid multiplication of schools soon proved to the legislative bodies the bad precedent they had established and the utter futility of trying to give each pathy a separate board. It also brought the educated members of all schools to see that it was absolutely necessary to bury forever sectarian medicine when administering medical registration law, that license boards did not meet to fight for the supremacy of therapeutical beliefs, but to sit as fair-minded men to decide the one question of whether or not the applicants for license who presented themselves for examination possessed the proper standard of educational and moral qualifications to make them safe practitioners in the field of medicine. It is, however, surprising to see how many examiners, even now, think it impossible to decide whether an applicant possesses the educational qualifications to make him a safe man to license unless he be examined on *materia medica*. Personally, I should be satisfied to decide after the privilege of examining an applicant on pathology and physiology.

Another defect in our laws, in a great measure due to the method of selecting and appointing the members of our boards, is that of not securing men qualified by training and natural tendencies to make good examiners. This is manifest in many of the lists of questions chosen by different boards throughout the country as a test of qualification. Many of these published questions must be acknowledged as unfair and wholly inadequate to elicit the desired information, viz., the applicant's real knowledge of the subject. Too frequently they are more calculated to determine what the applicant does not, instead of what he does know. It must be admitted that there is much that the best of men do not know, and that a fool can ask questions that a wise man cannot answer. The profession can not be too strongly urged to lend their constant efforts in trying to influence the appointing power to select men who are capable, and

who will discharge their duty with credit and honor to the state and the profession. Let the men who will make good examiners be advocated irrespective of school or faction, as those things should have nothing to do with the selection of the personnel of an examining board.

During the past several years of my service as secretary-treasurer of the Colorado Board it gives me pleasure to state that there has never been the least friction on account of the composite nature of the board, and furthermore, I wish at this time to acknowledge the loyal support and efficient work of the Homeopathic and Eclectic members who have at all times and occasions shown themselves ready and competent to do their full duty.

One of the most important features of a medical law is the provision relative to the prosecution of those who break it. These laws are really of remedial nature, though generally classed as criminal. Should a court consider the statute purely criminal, and to be construed with the customary strictness of a criminal act, it becomes very difficult to secure a conviction. Therein lies the chief protection of the quack and the cause of the failure of the law to accomplish its main object, viz., to protect the public against charlatantry. One only has to scan the pages of our magazines and daily press to see that quackery is rampart in almost every state in the Union, and especially in those which boast of their high standard of medical licensure. In many states all energy is expended in seeing that no one is licensed unless he possess an extra high standard of qualification but nothing is done to stop the unlicensed quack, who plies his trade with impunity. In others the process of prosecution is hedged about with so much "red tape" that it takes years to secure a decision, and the authorities are either derelict or spasmodic in their efforts to enforce the law. The subterfuge of managing a so-called sanitarium or institute permits of much evasion of the law, and demands for its correction additional leg-

islation. Whether it is wise to bring this about by amendment to our existing registration law, or the enactment of a new statute, is a question I am not fully decided upon, but am inclined to think it should be by separate statute. Further, it is a fact to be regretted that the average medical man feels disinclined to testify or to give information relative to infractions of the law unless he be personally interested. This results in many failures. It does not take long in such cases for a court and jury to recognize the spirit of personal revenge, and the prosecution ends in a failure to convict, with the impression that all the medical profession wants a registration law for is to reek petty spite and try to build up a trade union.

Last, but not least, of the salient features of a medical law that I wish to consider in this paper is the proper definition of what constitutes the practice of medicine. No section of this, or any other statute has been the battle ground of so much legal quibbling, and the greatest difference of opinion exists in the supreme court decisions handed down in cases depending upon what constitutes the practice of medicine. The diction of the several statutes in a measure explains this difference of opinion, but not altogether, as many times where we see the widest difference of opinion we find the working of the statutes the same or strikingly similar. The difficulty has been to get a definition sufficiently concise to prevent misconstruction, and at the same time comprehensive enough to cover all classes of infraction of the law. The essential basis of any such definition must be: "The holding oneself out as being engaged in the care of sick or injured human beings," and that irrespective of the form of treatment, because any attempt to make the form of treatment an essential part of a definition not only renders conciseness an impossibility, but necessitates the procuring of evidence that is next to the impossible when prosecuting a case under such a statute. Barring the buncombe inject-

ed, which you all know was through no fault of mine, section eleven of the Colorado statute contains a definition of what constitutes the practice of medicine that is comprehensive and applicable to any conceivable case. It is to be hoped that the courts will pay no attention to the meaningless buncome referred to, and that the remaining good part of the section will serve the purpose for which it was intended, viz., to make the law operative by rendering it easy to secure the conviction of persons attempting to evade its spirit and intent.

PART II.

THE INFLUENCES THAT MOLD MEDICAL LAWS.

As is true in the history of all problems involving questions of public welfare, the history of medical legislation is replete with bitter battles waged between contending forces. It is, however, specially interesting to study the nature of the forces influencing medical legislation, because we find them so different from what we should naturally expect. For the purpose of consideration they may be classified after the true Hibernian method, viz., for and against. Among the former we should expect to see the desire upon the part of the people to protect themselves against incompetency, quackery, and all that those terms embrace, the strongest factor in the enactment of these statutes. But in no instance can it be asserted that the people have ever taken the lead or shown the least interest in the enactment of a medical law. On the other hand, we find that it has been the medical profession who have taken the initiative in securing the passage of these laws, primarily intended for the protection of the public health, and beneficial to the profession only in an indirect way. The fact that medical men have been so earnest, unselfish and persistent in their support of these laws, in the face of the apathy and indifference manifested by the people, has always militated against successful medical

legislation, because it is difficult to establish the fact with many persons, especially members of our legislature, that there exists in the heart of man such a thing as a desire to labor for principle.

Our efforts, however, have, to a great extent, been poorly generalised, disconcerted and spasmodic in character; with no definite plan for action common to any two states, and frequently in the same state we find each succeeding legislative committee totally disregarding the work and plans of its predecessor. They discover too late that they would have been more successful had they profited by the experience of those who had gone before them. What the profession needs, and must have before there can be uniform ideas regarding medical legislation and concerted, definite plan of action, is to have some deliberative body meet, discuss and agree upon the proper principles underlying the several essential features of a medical law. Such a body should be made up of at least one representative from each state and territory, and the Federal District, and should hold a session of fifteen to thirty days, in which time they could agree upon the essential features of a model law, and adopt a plan of action to be recommended to the several state committees. An attempt to secure such a model act was made at the National Legislative Council two years ago, but, owing to the necessity of carrying on their labors by correspondence among the members of the committee, it failed to accomplish anything. For the same reason so many of our A. M. A. committees who meet for a few moments during the annual session, seldom with a majority present, and frequently do not meet at all, fail to achieve aught toward the purpose for which they were appointed. It takes time and deliberate thought to accomplish anything along these lines, and the sooner the profession realizes the necessity of tackling these problems in the proper manner, the sooner we may expect success to crown our present disconcerted, spasmodic efforts.

Passing on to the consideration of the forces influencing medical legislation adversely, we find the spirit of charlatanism to be the all-important factor or force that has blocked the progress of medical legislation in the past; and in the future it will be the most formidable obstacle to overcome in correcting the defects in our existing laws. In considering charlatanry in this phase we must not forget that it is not limited to the advertising and blatant quack. We see its diabolical influence springing from sources we should not suspect. A wolf in disguise is far more dangerous than otherwise, and it is not surprising that we should find so many of our older doctors losing faith in the ethics of the profession as a whole. It is no wonder that we see pessimism on the increase, when sharp practice and deeds that would not be considered honorable among highway robbers, are indulged in by members high in the profession. True, the quack has his direct influence with legislators in a material way, and indirectly through the venal press, but the load that the profession carries in the quacks who are sufficiently shrewd to remain within the ranks, is incalculable. Their acts are like one's own misdeeds, difficult to defend and ever in the pathway to success. As coadjutors of the quack may be named that horde of deluded mortals, who through the teaching of medico-religious vagaries become fanatical, and who at the very suggestion of a law that might indirectly interfere with the practice of some tenet of their faith, throw their entire membership in absolute solidarity against the measure which in reality is designed to protect them against imposture. It must be admitted the most devout Faith Curist wants and seeks the services of a physician when pain gains supremacy, be it a belief, a phantom or a reality—and furthermore, they are then very anxious to have the best talent the community affords. These self-same fanatics, whose creed is so full of deity and love as to make it meaningless to the ordinary individual, join forces with those human vampires, the quacks and

professional abortionists, and sing "Hosannas to God on High" when they have defeated a measure calculated to raise the educational and moral standard of those to whose tender mercy the sick and suffering are to be given.

How it is best to deal with these people is a difficult problem. Personally, I believe it is better to assume the attitude we generally find effective in handling a hysteric—one of sympathy, guarded by firmness; sympathy for their ignorance and misdirected efforts, but a firmness that will not allow imposture. The disciple of any faith must be allowed full religious liberty, but he must be made to understand that a creed can not be so construed as to allow him to assume the offices of a profession which the state has regulated by statute, any more than the Mormon can continue in polygamy under the guise that it is a tenet of his religious belief. It is better, however, to let these religious fanatics indulge in their incantations so long as they do so as duly ordained ministers of their church, but when anyone attempts to deceive the public as being engaged in the healing art under the guise of religion or gift from Heaven, he becomes a dangerous individual to society, and should be made to feel the strong arm of the law. It must be remembered that in protecting the public health it is the worst of folly to attempt to accomplish it all through the medium of the medical registration law. The misguided fanatic who withholds surgical aid from the child, who may be bleeding to death, can and should be handled under the statute which imposes a penalty upon the parent or guardian who fails to care for his child or ward. Again, when fanaticism causes its votaries to deny the existence of smallpox or the other well known contagious diseases, the proper enforcement of the public health and quarantine statutes will prove far more effective. In fact, they seldom fail in prosecution, because the public are informed as to the nature, and know the danger of spreading contagious diseases.

The most potent force that influences medical legislation adversely, and one for which the profession have themselves to blame, is the profound apathy and indifference the majority of its members manifest in matters pertaining to the enactment or amending of these statutes. With unwarranted school dissensions and this apathy on the part of the profession, how can we expect a few enthusiastic members to cope with the solid front of the opposition? Of the sixteen hundred registered physicians in Colorado, less than three hundred contributed to the legislative fund during the last two years, and counting the total contributions from individual members, and society appropriation during that period of time, your committee has received about thirty cents per annum per member.

Further, it should be remembered that it is far easier to oppose legislation to a successful end than to secure the passage of the most just bill imaginable. It is to be sorely regretted that such a large portion of the profession are so apathetic in legislative matters, but when we consider the life and duties of the average medical man it is not surprising. Hard worked, under paid and pinned down to the routine of practice, in which he is, as a rule, absolutely czar as to opinions and conditions, it is no wonder he develops traits of character unfavorable toward making him an integral unit of an organized body whose key to success lies in following those in command. It is calculated to make each one a leader, but we all know that in battle we need more privates than officers. This phase of our life is unfortunate, and for that reason should we cultivate consultation and society intercourse on every turn. The ablest men can often learn lessons of value from their inferiors. Our legal friends have the decided advantage of us, as they are daily crossing swords with their brother practitioners, which has the effect to keep down their bump of conceit. Lawyers frequently

engage in the most formidable fight before the bar, in which each may assail the judgment and opinion of the other in the most vigorous manner, and a few moments later meet as the best of friends. How is it with us? If in consultation we happen to differ in opinion, what diplomacy, what choice of language do we have to resort to lest we offend? Often then the over-sensitive nature our environment and life have developed causes us to consider such difference of opinion as an insult to our professional ability.

Nothing strengthens a man in his chances of winning a contest more than to realize his own shortcomings. We as a profession should recognize the danger of becoming narrow-minded and autocratic through the conditions peculiar to our work, and do all in our power toward the development of the broad spirit of free-masonry, liberality and consideration of the opinion of others.

In many states the dissension in the profession, caused by school jealousies and the attempt on the part of the regular school to abolish sectarian medicine by force instead of by argument and due consideration of the right of others to their opinions, has been in the past, and is still, an influence that is damaging to the progress of medical legislation. We in Colorado are fortunate in regard to this matter, as the representatives from the majority of schools some time ago recognized the absolute needlessness of dragging the question of sectarianism in matters pertaining to medical licensure. They saw that the state could never afford to recognize any school of medicine or attempt to regulate the practice of medicine upon any other basis than that of a uniform educational standard common to all practitioners, irrespective of therapeutical belief. It is to be hoped that in the future no one will be so shortsighted as to stir up any dissension upon this point, and start anew the strife that was in the past a serious obstacle toward the enactment of a good medical law. There was a time, and in

some localities the influence still obtains, although it will not last long, when the commercial medical school played an important role in moulding our medical registration law. Bitter has been the opposition from such institutions, but it is gratifying to note that in no instance have they succeeded in the end, and today those back of commercial medical colleges might as well, as did Balshazzar of old, read the handwriting on the wall: *Mene, Mene, Tekel, Upharsin*. They have not been driven from the field by any legislation or opposition. The natural trend of affairs has made it impossible to give the course of instruction demanded by the rapid advances in medicine outside of a medical institution equipped as can not be expected of other than one that is well endowed. This means that it costs more to give such a course of instruction than is charged in our best universities, and while a few men may bolster up a school in which they take pride, having perhaps been identified with it since the granting of its charter, and in which good work was done in its day, but having the present conditions to reckon with, it is only a matter of a short time until such institutions must either secure ample endowment to obtain the proper equipment of its plant in keeping with a modern university, consolidate with some well endowed institution, or go out of business.

In closing allow me to acknowledge the loyal support I have received from the rank and file of the profession throughout the state in the fight for a better medical registration law in Colorado, and at the same time to beg of the profession to accept the criticisms of our shortcomings in the spirit they were intended, viz., that in calling attention to them it might result in our own good.

Let me remind the profession that while we made a great stride forward this year, we must not rest or think for a moment there is nothing more to do. Eternal vigilance is the price of liberty, and it is well for us to realize that we must guard well

the ground we have gained, and continue our fight for the goal we have set, viz., the best medical law obtainable.

RESPONSE OF DR. H. G. WETTERILL.

Members of the Colorado Medical Society:

I want to thank you for this mark of your favor and confidence. I feel that the Society has taken a great responsibility in trusting its management to me, and that I also have assumed a great responsibility. Colorado is a large state. As you know, it is over 380 miles from the Kansas to the Utah line, and it is about 280 miles in the other direction. It has an area in square miles greater than the whole of New England and the state of Ohio. We have something more than half a million population. We have a medical body which is universally conceded to be equal in ability, skill and attainments to that of any state of the Union, and it is a great honor to be chosen in the kindly way (I think I may be allowed to say in the unanimous way), in which this election has come—an honor which I appreciate and which I shall always remember with great pleasure and gratification. A number of friends have congratulated me, but I have told them that such congratulations were premature, that we should wait till a year from now; and then know whether the individual you have selected as your president is to be congratulated and whether the society is to be congratulated.

Now the officers of our society can no more win victory and success than the general and the lieutenants of an army corps can win success in battle if we, your officers, do not have the support of those who make up the great medical body of this state we can have no success. Dr. Black, whom you have selected for secretary, will co-operate with me, and so far as we are able, I can promise you that we shall leave no stone unturned to make the coming

medical year a successful one. But we rely upon the members of the society from all over the state—from Sterling in the northeast to Durango in the southwest, and from Las Animas in the southeast to Hahn's Peak and Meeker in the northwest, to do everything that each individual can do in order to make this next meeting a success. President Finney, Secretary Blaine and Colorado Springs fellows have set a pace which is going to be very difficult to follow.

The members of the profession in Denver in particular are put upon their mettle to keep up the pace which has been set for us, and we must not fail in our effort.

I note with a great deal of pleasure the growth which this society is making. As we have just heard from Dr. Blaine, the secretary, we have now a membership of 556 in the Colorado State Medical Society. This is not quite doubling the membership during the last three years, the period of reconstruction under the American Medical Association plan, but it is almost doubling it, and I think I am right in saying that a large proportion of that accession of growth has come from the state at large rather than from the cities. That the new county organizations and the new members who have been taken into the old county organizations are largely responsible for this growth. Now that being the case, it ought to be a very great pleasure to give these newer members from the outlying portions of the state not only recognition, but the right hand of fellowship in the most cordial way, and we ought to urge them to share the responsibilities, and I trust that we may be able to do this. I am sorry to say that there are many of these members whom I have not met, but I am looking forward to the pleasure of meeting them during this year, and inducing them to co-operate actively in the work of the society.

Gentlemen, I have nothing further to say, excepting to beg that you will allow me to repeat that I have the highest appreciation of this honor which you have

so kindly tendered me, and so far as it lies in my power to serve you I shall have great pleasure in doing so.

SILVER SALTS IN OCULAR THERAPEUTICS.

BY GEORGE F. LIBBY, M. D., DENVER.

The use of the new organic salts of silver, especially argyrol and protargol, has become deservedly popular in the past few years. Protargol and argyrol are here advocated in place of nitrate of silver because these new silver salts exhibit generally the same benefits, and are devoid of the dangers, attendant upon the employment of silver nitrate.

What is here said of protargol would apply quite as well to argentamine. Other of the new silver salts will not be mentioned because, while their effects seem to be similar, their value is less established.

The new silver therapy will here be applied to the treatment of catarrhal and purulent conjunctivitis, dacryocystitis, ulcer of the cornea, and trachoma; also to preparation of the eye for operation.

In the treatment of catarrhal inflammation of the ocular or palpebral conjunctiva and the walls of the tear passages, after the secretion changes from a watery to a mucous or muco-purulent character, instillations of 1 per cent protargol or 5 per cent argyrol will check the secretion and cut the attack short. Where the condition is purulent the strength of these solutions may be increased two to five times, and the solution may be painted on the everted lids as well as instilled into the eye.

As a preventive of ophthalmia neonatorum, protargol in 20 per cent solution and argyrol in 25 per cent solution has been used with much less irritation and as marked success as the regulation 2 per cent nitrate of silver.

The writer would recommend the use of protargol in all cases of ophthalmia of the new born, and argyrol in all cases of gonorrheal ophthalmia of the adult. In

corneal involvement use protargol in either disease, only supplanting it by silver nitrate if found ineffective.

Silver nitrate in 2 per cent solution instilled into the eyes of infants at birth to prevent ophthalmia, has caused persistent and fatal hemorrhage in several reported instances. This is a rare but real danger which the use of protargol would remove, without sacrifice of an agent any more prophylactic.

The preference for argyrol or protargol in ophthalmia neonatorum does not depend so much, if at all, on their greater penetrating power or bactericidal effect than silver nitrate, as claimed, but upon the fact of less irritation of the delicate tissues of infants' eyes.

After the acute stage of dacryocystitis 2 to 4 per cent protargol has proved more useful to me than any of the other silver preparations, though all are valuable adjuncts in the treatment of his troublesome disease.

In corneal ulcer I would recommend argyrol up to 25 per cent, or even 50 per cent, where decided stimulation is needed; but for caustic action, the solid nitrate of silver. For producing local anesthesia before applying silver nitrate to ulcer of the cornea, the nitrate of cocaine is preferable to the hydrochlorate, which is incompatible and precipitates chloride of silver, leaving a permanent stain on the cornea.

The new silver salts are well recommended in the early stages of trachoma, with enlargement of the conjunctival follicles and considerable secretion; but their prolonged use has caused staining of the conjunctiva. In the later stages of trachoma, nitrate of silver in strong solution or the solid stick is better.

As preparatory to operations upon the eye, the use of argyrol in frequent instillations for a few days previous has seemed to prove an efficient disinfectant. Protargol should be equally effective, but nitrate of silver in strength to disinfect (above 5 gr. to 1 oz., or 1 per cent), would be contra-indicated on account of its irritating and even caustic effect.

All solutions of organic or inorganic silver preparations should be made *fresh*, with cold distilled water, and of course the different salts may be alternated if either one proves ineffective.

In the hands of one who has had much experience in everting the lids (often a most difficult task in the cases in which silver applications are indicated), who will not bruise the cornea in the act, and who will wash off all excess of the solution, silver nitrate is as effective and possibly as safe as the newer salts, but is more unpleasant to say the least.

But none of us is so skilled in manipulation, or so undisturbed by movements of the patient as *never* to get the application on the cornea as well as the palpebral conjunctiva. This being so, it seems reasonable to advocate the newer silver salts where strong applications are required, and to suggest their use also when it is desired to produce mild stimulation.

DISCUSSION.

Dr. Chase: When the silver salts were introduced I took them up as enthusiastically as any one, hoping to avoid the irritating effects of nitrate of silver, and of course still use them in many cases. My own experience, however, has led me to the conclusion that protargol and argyrol are not as safe as the

nitrate of silver in purulent conjunctivitis. A well known teacher of ophthalmology in a Michigan school used to say to his students, that to lose an eye from ophthalmia neonatorum was an evidence of malpractice. Of course this statement was too radical, and, as a matter of history, was introduced in a suit for damages against a doctor who had lost an eye suffering from ophthalmia neonatorum. The statement contains, however, so much of truth that I sometimes relate the incident to impress on the students the fact that almost no eyes are lost from ophthalmia neonatorum in an otherwise healthy child, provided proper care is taken of the case. My own experience, I repeat, has led me to not use argyrol in ophthalmia neonatorum. I rely upon what is absolutely certain, and that is nitrate of silver; for in twenty years I have never seen a case of ophthalmia neonatorum fail to get well when treated by nitrate of silver, and I have repeatedly seen cases of ophthalmia neonatorum fail to get well when treated by protargol and argyrol. So I teach the students the one method that will cure, instead of one that may or may not cure. There is one unpleasant result following the long continued use of protargol or argyrol. I refer to the staining of the conjunctiva. I once gave a protargol solution to two different patients, with directions to use the remedy at home, and report to me within two months. One of the patients reported back in about a year, the other in eighteen months. All four of the eyes were badly stained. My experience in these cases has made me very adverse to allowing patients to use the medicine except under medical supervision.

Dr. Jackson: Carelessly used, more harm can be done with silver nitrate than with any of the organic silver salts. On that account I think it is worth while before a general medical society to emphasize these two points. Those who have written lately about the Credi method of preventing ophthalmia neonatorum have insisted on the importance of following exactly the directions given by Credi. A single drop of the 2 per cent silver solution is to be dropped from a glass rod on the center of

the cornea, holding the lids apart until it becomes evenly diffused and then let the eye close, without any attempt to subsequently wash out the eye. The other point is that silver nitrate applications must not be repeated too frequently. That was mentioned in Graefe's original article with reference to its use for ophthalmia neonatorum. Where it does harm it is repeated too frequently. The proper guide is that so long as there are little points of hemorrhage apparent in the mucous membrane the application of silver nitrate must not be repeated. Usually 24 hours is quite soon enough; sometimes 48 hours should elapse before the repetition. I believe that silver nitrate still has a very important place in our armamentarium. It is not wholly superseded by the newer organic salts, although these are of great value and may be safer in unskilled hands.

Dr. Espey: I want to call attention a little more forcibly to a point that Dr. Libby mentioned rather casually, because I think that sometimes it means a difference in the results in the use of these preparations. Protargol and argyrol solutions decompose very rapidly, and they cannot be kept as office solutions are often kept. A 25 per cent solution of protargol, for instance, after the expiration of two or three weeks becomes practically inert, and probably a weaker solution would become inert more rapidly.

Dr. Foster: I would like to agree pretty thoroughly with the author as to the value of argyrol and protargol in the purulent eye conditions, but I do not think we can rely entirely upon them, especially in ophthalmia neonatorum. I have found that the physician will get better results if he will use the nitrate of silver himself. There is no question of doubt about it that argyrol and protargol have a wonderful healing effect, used several times a day by the nurse, preserving the gain made by the nitrate of silver. In other words, I believe there is good ground for our believing thoroughly in argyrol and protargol. They wont entirely carry you out of the woods, as you have got to use nitrate of silver in a great many of the cases. In catarrhal troubles I have not found

that the silver preparations are as good as others, as zinc and boric acid, etc. I think they are rather limited to the purulent conditions. Now there is another point that the author has brought up, but he has only told a part of the story. He spoke of the good that there preparations did before an operation on the eye. I have found they have equally as excellent a place afterwards. In operations like pterygium, tenotomies and shortening or advancing the muscles, I think it is really the best practice with the use of argyrol, to omit bandages and leave the eyes open. Apply your protargol three or four or five times a day; it kills the germs that may get in, and you get excellent result. There is no doubt that these preparations have a large place in ophthalmology.

Dr. Libby: I want to thank the members for their kind discussion, and to remind Dr. Chase that I left plenty of room for the use of our old friend nitrate of silver, by using which in ophthalmia neonatorum with unvarying success, he has been more fortunate than most oculists. I simply feel, as Dr. Jackson has stated, that a great deal of harm has been done by the improper use of nitrate of silver. I believe that comparatively little harm can be done by the improper use of the new silver salts, and I believe that in nine cases out of ten they will be just as effective. Therefore, I consider it is better to give your case the benefit of the doubt until you have proved that you have got into deep water, and then you can turn to the nitrate of silver if need be. I think also that one reason why we cling to the old nitrate of silver is that we naturally cling to old and tried remedies, as well as friends. We have a certain timidity about taking up a new thing; and I think that that is one reason why some men have not made friends with the newer preparations, especially protargol and argyrol—they have not given them sufficient trial. In the Philadelphia Hospital and in the Maternity Hospital of the University of Pennsylvania, for instance, they tested argyrol for a year, using a 25 per cent solution in every case of ophthalmia neonatorum, and for another year they used a 20 per cent solution of

protargol. Their results were entirely satisfactory. That really is a reliable test—not the test that I or one of my colleagues makes of it in private practice, but a series of tests in large clinics or hospitals, covering a year or more of time. I like the point that Dr. Foster made of using argyrol as treatment following certain operations; and having spoken of its use as preparatory to operation, should have added this application of its therapy. Dr. Espey's emphasis on the readiness which protargol and argyrol decompose, was well placed. This applies to all the silver salts, organic and inorganic, though possibly less so to nitrate of silver.

DEFORMING INJURIES OF THE LIGAMENTS AT THE WRIST CONNECTING WITH FRAC- TURES.

GEORGE W. MIEL, M.D., DENVER.

Injuries to the ligaments of the wrist, taking the serious form of complete tear or rupture, so far as I can ascertain, through diligent search, are given no special classification in the several surgeries. They are omitted in some, and receive consideration in a general way in others; a few give them special consideration in their relation to fracture and dislocation. They occur in the great majority of instances in connection with fracture involving the inferior extremity of the bones of the fore arm—much more frequently relatively to radius, and in that form of fracture termed Colles'. In this association the complete rupture of the internal lateral ligament is the most serious—of the anterior carpal ligament next, and the posterior radio-ulnar of lesser consequence.

More than one may be involved simultaneously.

Inasmuch as this fracture is generally conceded the most common in occurrence of all fractures, and the one involving the physician in litigation most often by reason of deformity attaching and prominently exhibiting and because skiagraphy and other advances in surgery have brought us more exacting patients, I ask you to look again into fracture at the wrist, with particular reference to deformity connecting by reason of the damage to the ligaments and tendons.

Fracture of the lower end of the radius is usually the result of a fall with the hand projected—the palm opposed. There is commonly considerable violence transmitted, as evidenced in the impaction often associated; and this in Colles' fracture, is received through the violently over extended hand, immense strain coming upon the anterior carpal ligament, and cross-breaking strain or leverage upon the end of the radius beyond the resisting power of its structure. So far, the great majority of writers upon this subject are agreed. Among others differing somewhat—Hamilton ascribes this fracture to a fall upon the hand while it is almost underneath the body, with the radius more vertical than horizontal. Beyond this point there are differences by omission, and by opinion. Some writers stop here; while, as I said in beginning, others generalize, and still others specify the concomitant damage to the ligaments—a few alluding to involvement of the tendons in addition. To me this feature of this injury has importance hardly second to the fracture. John H. Packard has quoted Moore, of Rochester, whose research in this matter has been fully exerted and useful, as advancing the opinion that in fracture of the lower portion of the radius, the fracture was a less important lesion than the luxation of the lower end of the ulna; which Packard remarks—is often a marked feature of these cases.

This prominence of the ulna is attrib-

uted by some to other causes, and I will therefore quote somewhat extensively the expression of a number of competent authorities with the expectation of your acceptance of the point as it is necessary and should be conclusive. These several quotations connect with Colles' fracture unless otherwise stated. Dennis, in his *System of Surgery*, 1895—"The internal lateral ligament is generally torn out of its insertion into the styloid process, and Moore has demonstrated the process becomes entangled in the internal lateral ligament."

Hamilton. *Moullin's Treatise on Surgery*, 1895—"Moore, of Rochester, demonstrated that in a certain proportion of cases there was rupture of the internal lateral ligament and the triangular fibrocartilage, whereby the ulna becomes dislocated and retained in its abnormal position by the annular ligament. The position of the tendon of the extensor carpi ulnaris muscle is the guide to the diagnosis of this complication."

Roberts. *Modern Surgery*, 1899—"Fracture of the lower end of the ulna, or of its styloid process alone, and rupture of the radio-ulnar ligaments and cartilagenous attachments are occasionally associated lesions—but as a rule fracture of the base of the radius is uncomplicated, except by comminution."

Hopkins' *A Clinical Treatise on Fractures*, 1900—"Often the internal lateral ligament of the wrist joint is itself torn, or else is detached from the lower end of the ulna, carrying with it a portion of the styloid process of the latter; undue prominence of the lower end of the ulna results. Recent observation, demonstrated by skiagraphy, indicates that the ulnar prominence accompanying Colles' fracture is more frequently produced by detachment of the tip of the styloid process than was formerly believed."

Senn. *Practice of Surgery*, 1901.—Uses in quotation the most recent views of Moore, which he endorses. "The fall producing Colles' fracture may be just suf-

ficient, but may be more. It is obvious that when the bone is broken the tissues attached to the ulna must bear the strain. These are the internal lateral ligament, and the triangular fibro-cartilage. * * * Both the ligament and the cartilage usually give way, but sometimes the cartilage alone. * * * When the ligament is separated, as is almost surely done by pulling off a scale of bone or even the entire process. * * * the triangular fibro-cartilage gives way at its weakest point:

Childs, of Denver, in a sufficient number of cases skiagraphed, finds the styloid of the ulna separated by fracture in about forty per cent. of cases the insertion into the pit of the styloid—and thus the ulna becomes dislocated.” Senn says: “From my last observation, I had come to the conclusion that luxation prevailed in about two-thirds of all cases.”

Frank. *Diagnosis of Surgical Diseases*, 1902.—“Recent studies of these fractures by X-ray examinations have shown that they are much more complicated injuries than generally supposed, being often comminuted or impacted, or associated with dislocation or fracture of the styloid process of the ulna, or fracture of the scaphoid or semi-lunar bones.”

Warren and Gould. *International Text Book of Surgery*, 1902.—“In many cases the styloid process of the ulna itself is torn off by the strain.”

Da Costa. *Modern Surgery*, 1903.—“In the author’s experience dislocation of the lower extremity of the ulna is not an unusual complication which arises from a fracture of the ulnar styloid or tearing off of the internal lateral ligament of the wrist.”

Herrick. *Railway Surgery*, 1899.—“There is also, as a consequence, a dislocation of the ulna on the dorsal surface of the cuneiform bone.”

Childs, of Denver, in a sufficient number of cases skiagraphed, finds the styloid of the ulna separated by fracture in about forty per cent. of cases.

The eldest I have sought, and yet apparently the most appreciative and con-

cise description is given by S. D. Gross in the last edition of his *System of Surgery*. —“Luxation of the ulna is not uncommon in this fracture. Moore, indeed, thinks that it is present in one-half of the cases; but this is probably too high an estimate. Fracture of the styloid process of this bone nearly always exists in the more serious forms of this accident; especially when the force is received upon the palm and on the inner margin of the hand. Displacements, if not actual rupture, of the flexor muscles of the carpus is an occasional occurrence. The carpal ligaments and the inter-articular cartilage also not unfrequently sustain serious injury, the latter being sometimes wrenched from its bed. When the force is expended upon the palm and the ulnar margin of the hand there will be likely to be, as a serious complication, a luxation of the ulna, either alone or in union with fracture of the styloid process of that bone. Fracture in this situation may be complicated with dislocation of the wrist. The prognosis of this fracture is greatly influenced by the nature of the case and the manner in which it is managed. In any event, however, it must, even in its more simple forms, be regarded as a serious accident, often followed despite the best directed efforts of the surgeon, by permanent deformity and impairment of the function of the wrist joint.”

This as truly sums the situation to-day as it did then. While a few writers relatively, in connection with fractures of the lower end of the radius allow for varying degrees of deformity, following in spite of proper treatment, many give the subject no mention, and others hold us to unreasonable, if not impossible results. These give too little consideration to concomitant and complicating injury to the ligaments in particular.

Agreeing that following fracture of the inferior extremity of the radius, the hand may eventually deflect toward the radius because of faulty reduction (avoidable); mismanagement (avoidable); oblique character and sliding displacement (less

avoidable); or cancellous loss (unavoidable). I attribute a considerable proportion—larger than thought, apparently—to damaged ligaments, whose necessary function exceptionally restores rather through good fortune than by surgical attainment; though conforming effort, support, maintenance—at in instances—angle, favor best attainment.

At this articulation the several ligaments of more or less delicate and complex arrangement to facilitate the various movements of the hand, and at the same time hold it in nice adjustment, must in connection with extensive fracture, suffer considerable damage and disorganization. As the hand is projected at strong flexion to break the force of a fall, the bones of the fore arm rotated into pronation, bringing the tip of the ulna prominently forward, the force received, with wrench associated in production of this fracture, often severs the proximal attachment of the internal lateral ligament; or separates by fracture the styloid process to which it is attached. With the hand looking upward, the styloid process of the ulna falls nicely into contour with the concave extremity of the radius, and takes a protected relation.

To oppose the formidable group of tendons—with long and diffuse attachment to the hand on the radial side, two of which cross each other at the joint, so giving additional support—we have upon the ulnar side—only the supporting tendons of the extensor carpi ulnaris, posteriorly, and the flexor carpi ulnaris anteriorly; both having limited insertion close below the wrist. The former to the back of the metacarpal bone of the little finger, and the latter to the pisiform bone over the lower attachment of the internal lateral ligament. It will be remembered the external lateral ligament of this joint is broad and has extensive attachment below, while the internal lateral ligament is rounded (cord-like), short, and has limited attachment above and below.

A glance at the anatomy of the wrist will satisfy one that the ulnar side must be considerably the weaker, and will impress

the importance of the internal lateral ligament in maintenance of the hand. Break this and the hand is apt to deflect toward the radius; tear away also the attachment of the ulnar extensor, and the deflection will be extreme. Neither will resume its original taut attachment, and a relaxed wrist wall with considerable vacuity ensues as permanent deformity. The hand setting over to the other side correspondingly. This is borne out in my own experience, where diagnosis covered these points, and fracture in the radius repaired without any appreciable shortening or deformity.

Careful investigation, coupled with good anatomical knowledge, assisted by comparison, can do much toward appreciation of these serious injuries. While skiagraphy, though it can not actually show us the damage to these ligaments, can give inference with reasonable certainty, through connecting distortion of the natural bone relation. It is not alone advantageous, but an advisable auxilliary, and in instances necessary.

We may with reasonable certainty infer that a lax wall at the inner side of the wrist and immediately below the ulnar styloid, after fracture has been readjusted to normal conformity, means that the internal lateral ligament has suffered complete rupture, or separated with the styloid, and that the extensor carpi ulnaris has also received serious injury—probably torn from its attachment; both to continue lax henceforth and permit the hand to set toward the radius. Skiagraphy shows the force expended sometimes sufficient to tear asunder the several bones of the carpus as well. When together with the above described condition a skiagram of both wrists shows abnormally increased distance between the extremity of the ulna and the pisiform bone (the styloid undisturbed), one should have no hesitation in the conclusion that the internal lateral ligament is torn, and characteristic defection may be expected. This is at first not apt to be prominent, but during the second or

third month becomes more so, and attains at the end of that time its ultimate prominence.

When skiagraphy shows us, as it can, that the ulnar styloid is separated by fracture, in the present extent of one's ability, we have no reasonable expectation of attaining again attachment by boney union, even though we might get the proper surface of the fractured styloid close to its former site; and we can have through our efforts little expectation of attaining fibrous attachment to the ulna. All that we can do looking toward either result, is to push the separated end of the ligament into favorable relation by properly directed pressure and favor continuance of this relation during treatment, by maintaining the fore arm, wrist and hand on a "Bond" or similar splint, which minimizes the distance between the ulna and pisiform bone, so favoring desirable attachment. But unless the styloid fragment is evident and held by the ligament, we are working in the dark, and our result rests with chance. In the second instance Dennis would endeavor to maintain the fragment with an adhesive strap.

The question arises. Is immediate operative effort to re-attach the ligament, or styloid and ligament to the ulna feasible and justifiable, meaning, as it would, a wound probably communicating with the interior of the wrist joint? With girls and unmarried women the question has especial application. The answer rests with you. I should say it is not.

In concluding the subject, I offer a case, illustrative of complete separation of the anterior carpal ligament. A young unmarried woman, while riding a bicycle, collided with a fence, and in projecting her hand at the time received a Colles' fracture. Two physicians had declined to set the fracture, and when I assumed charge the damage to the anterior carpal ligament was not recognized, owing to inflammatory exudates present. The bone injury progressed apparently to perfect recovery,

and the hand retained its normal relation until the splint was discarded, when it was discovered the hand could be lifted posteriorly almost half an inch. This had occurred in spite of proper supporting treatment, and persisted. The patient was sensible, reasonable, and satisfied this partial deformity occurred through no fault.

THE CHEMIC COMPOSITION OF MEDICINAL PLANTS.

BY EDWARD C. HILL, M.D., DENVER.

Vegetable matter in general shows a marked complexity, yet simplicity of composition. This paradox depends on the close chemic relationship of the various carbon classes, and on the fact that vegetable forms are built up largely from a few simple compounds (water, carbon dioxid, nitrates, phosphates) by a process of polymerization (formaldehyd, a primary product) with elimination of water and oxygen.

The rootlet cells of plants distended to normal turgor with their slightly acid (carbonic) and saccharine protoplasmic contents cause endosmosis, though the elastic limiting membrane, of the mineral solution in the soil. This nutrient fluid, drawn up to the leaves by osmosis mainly, is elaborated there, through the agency of chlorophyl and sunlight, into a sort of mucilage, which, by the addition or subtraction of water, becomes the sugar of the sap and fruit and the starch or cellulose of the tuber and woody portions. The curve of anabolism in plants is most rapid from exposure to the yellow rays of the spectrum, but actinic rays are said to be specially favorable to the multiplication of chlorophyl granules. The fluorescent nature of chlorophyl is an aid in the utilization of sunlight. Plants, like animals, have selective nutritive power, and take up proportionally more bases from the soil solution, unless this contains excess of nitrates. The ferments in plants are essential to their growth, to the germination of seeds and the ripening of fruits.

Plant principles used medicinally consist chiefly of catabolic products, which serve the purpose of self-protection against bacteria, fungi, insects, worms and larger animals. Thus bitter tannin and alkaloids, essential oils and the prussic acid of stone fruits may be of service in a manner analogous to the cerumen of the external ear. Solanin develops much more in growing potatoes exposed to direct sunlight. Volatile oils, resins and oleoresins may attract or repel insect visitors. White pine contains so much resin that it is said never to rot. Resins are probably also of use to shrubs and trees in keeping up internal heat during the winter. Gums are usually formed by transformation of all or part of the cell walls. They have been produced by growing micro-organisms on artificial media, and the yield of gums can be vastly increased by inoculating certain trees with cultures of proper bacteria.

The roots of medicinal plants contain various alkaloids, glucosids, fixed and volatile oils, resins and starch. The smaller leafy and flowering or fruiting stems of many plants are used in medicine. Tubers are in the main a storehouse of starchy reserve material for the use of the plant in the second year of biennials. Rhizomes likewise, as a rule, contain considerable starch. The outer color of barks depends on lichens. All barks contain much tannin (*quercus alba*, 7 per cent; *rubus*, 20 per cent.), which varies slightly in constitution in different plants. Heart woods often have tannin, resins and coloring matter. The green color of leaves and floral foliage is due to chlorophyll and the closely allied anthophyll.

The coloring matters of flowers are mostly unknown (probably phenol compounds) and are readily decomposed. These colors serve, like the scent, to attract insects to get the nectar (saccharose) and pollen, and so insure cross-fertilization. White or pink flowers are turned blue by treating the plant with iron. Plants bloom (Loew) because of stimulation by the sugar in the

sap. This saccharine solution is more concentrated when the moisture supplied to the plant is deficient.

Malates, tartrates and citrates and their free acids (more in unripe), with sugar (replaces starch) and pectin, are the chief ingredients of edible fruits. All aromatic umbelliferae yield volatile oils. Seeds are relatively rich in fats, proteins and alkaloids. The aleurone grains are made up of a globoid body of the phosphates of calcium and magnesium and crystalloid proteids, in a ground substance which is soluble in water.

Climate, season and soil have much to do with the composition (quantitative particularly) of plants. The proportion of any element in a plant can be greatly increased by furnishing its rootlets with a suitable mineral substance. The iron-content of spinach has been increased sevenfold by treating the soil around the roots with ferric hydrate. Many volatile oils vary in their constituents according to climate and soil, and even with the part of the plant. The tannin in geranium is very abundant in April. The hydrocyanic acid of *prunus virginiana* amounts to 1.7 of 1 per cent. in October, and is developed on moistening. The composition of resins from a plant may vary from day to day. American aconite (up to 0.85 per cent. alkaloidal value) is more active than the European.

Roots should be gathered at full maturity, just before the flowering period—biennial plants in the autumn of the first year, perennial in the fall of the second or third year. Aconite tubers are usually best gathered in winter or early spring. Barks are to be peeled off in the spring when the sap begins to flow, or in winter. Only the inner layer of the coarser barks is used medicinally. Leaves and herbs should be collected when the plants are in full flower, and should be dried carefully in the shade so as to retain their bright green color. *Digitalis* leaves should be plucked in the autumn of the second

year; they must be used within a few months. Flowers are collected when they first open or just after, and are dried in the shade. Seeds are to be gathered just while ripening, before the seed-pods are open, and are winnowed to remove fragments of stems, leaves and shriveled specimens.

Crude drugs and their products used in medicine are generally mixtures of considerable complexity. Thus *asafetida* contains a dozen chemical constituents. Oil of peppermint consists of at least 15 terpenes. Even the so-called active principle are not always chemical entities. Commercial *aconitin* is a mixture, in variable proportions, of true *aconitin*, *pseudoaconitin*, *aconin*, *pseudoaconin* and *pieraconitin*. The crystalline *aconitin* is about three times as strong as the amorphous, and this is five or six times the strength of the electic resinoid *aconitin*.

The resinoid mixture termed *podophyllin* (pptd. by water from an alcoholic extract of *podophyllum*) contains *podophyllinic acid*, *podophyllotoxin*, *picropodophyllin*, fatty oil, extractives and a yellow pigment. *Daturin* is a mixture of *atropin* and *hyoscyamin*.

"*Pelletierin*," or "*punicin*," comprises all the alkaloidal constituents of pomegranate bark. The "*gelsemin*" of commerce is a mixture of *gelsemin* and the more active *gelseminin*. "*Veratrin*" is a mixture of quite a number of alkaloids; "*coniin*," of four; "*aspidospermin*," of six. The "*strophanthin*" of commerce (mostly *pseudostrophanthin*) is often a very toxic and variable mixture. "*Staphisagrin*" is a mingling of amorphous bases. *Digitalis* is more reliable than its glucosids, and *spartein* is very uncertain in action, partly perhaps because of its volatility.

Because of cheaper production, synthetic preparations are replacing more and more the natural plant derivatives. It suffices to mention in this connection the manufacture of *salicylic acid* and oil of wintergreen from coal-tar; of *camphor* from turpentine; of *valeric acid* by oxidation of

amyl alcohol; and of *codein* by methylation of *morphine*. Much alcohol is now made synthetically.

A growing plant is more than three-fourths water, which keeps up a marked tension, and by the partial loss of which the plant wilts. The ash of plants seldom exceeds 3 per cent. (*rhubarb* sometimes 40 per cent.; 15 per cent. in *chondrus*), being most abundant in the stem and leaves. Mineral substances in general facilitate chemical reactions. Calcium serves the same purpose in the cell-walls of plants as in bones. Potassium aids in condensing organic molecules. Sodium is not needed by plants. Silica gives a protective sheath or cutting edge to certain leaves. *Buchu* ash is rich in manganese. Potassium nitrate is a common constituent of plants (*hyoscyamus*, tobacco, borage), but the most abundant plant salt is calcium oxalate, which appears in single or multiple (raphides) crystals in many species (most in *rhubarb* root). Calcium carbonate is found occasionally as "*cystoliths*," resembling bunches of grapes.

Vegetable acids are widely distributed throughout nature, being partly free and partly combined with metals and alkaloids. Oxalic acid is most abundant, giving the sour taste to many plants. Combined with the alkaloids of *cinchona* bark are *kinic*, *kinovic* and *cinchotannic* (tannin with red coloring matter) acids. The disagreeable odor of *viburnums* is due to *valeric acid*. The bitter anthemic acid is found in *matricaria*; *enbebic acid*, in *cubeb*s; *igasuric acid*, in *nux vomica*; *maizenic* in *corn-silk*; *acetic* in *pitch*; *copaivic* in *copabia*. *Filicic acid* changes with age into its inert anhydrid *filicin*. Sugar or molasses is usually added to the pulp of tamarinds, to cover the sharp taste (9 % citric acid).

The alkaloids of plants, in combination with acids, are most abundant in the seeds and roots, and occur almost exclusively in dicotyledons (*muscarin* in fungi). The pyridin nucleus, extended in cross-chains of carbon, appears in *cocain* and the *solanaceous* alkaloids; the *quinolin* nucleus

(pyridin with benzene ring), in the strychnos alkaloids. Some opium alkaloids show a three-ring structure of phenanthrene united to pyridin with an O substituted for one C.

Belladonna shows more alkaloids in the leaves than in the roots (young ones contain hyoseyamin only) at all times; more in the stem (bark) than leaf when the berries are ripe. Veratrin is obtained mostly from cevadilla seeds, and strychnin from ignatia.

Cinchona bark contains 43 alkaloids (35 preformed), many of which are isomeric with quinin, quinauin or einchonin. The yellow alkaloid berberin (a simple bitter) is present in barberry, columbo, golden seal, mandrake, pareira brava, yellow parilla, prickly ash bark and other plants. There is no opium in poppy petals, and little, if any, strychnin in the bark of nuxvomica. The volatile oily alkaloid "peltierin" may disappear from granatum bark if kept long. Among amorphous plant bases are cannabin, colchicin, delphinin, lobelin, oleandrin, pseudocurarin and the alkaloids of hops.

The neutral principles (glucosidal and nitrogenous) of plants include some of the most important remedies. The glucosids may be of service to the plant as potential sugars; saponins are strong emulsifying agents and are important constituents of digitalis, senega, sarsaparilla, squill, guaiac, quillaja. The tannins are extremely abundant, occurring chiefly in barks and leaves, sometimes in globular masses. The juice of opium has no starch or tannin, while that of catechu has 40 per cent. tannin; pinus canadensis, 14 per cent.; kino and red gum, 45 to 55 per cent. The purgative derivatives of anthraquinone comprise emodin (rhubarb, aloes, senna, frangula) and the neutral "chrysophanic acid" (senna, cascara sagrada, rhubarb). These dissolve readily in alkalis (set free by alkalis of intestine), giving a red color (alkaline urine). Purshianin, the most important constituent of cascara sagrada, contains an irritant ferment acid (gripes

and pukes), which disappears on heating a few hours at 110 degrees or on keeping a year or two.

The glucoses of digitalis are more soluble in water than in alcohol, digitonin serving as a saponin-principle to render the others absorbable. Digitalin is the chief constituent of amorphous "digitalin"; digitoxin, of the crystalline. In old infusions and when the leaves are stored damp, digitalin, digitalein and digitoxin decompose into resins acting like picrotoxin.

The bitter principle elaterin constitutes 44 per cent. of elaterium. The neutral active principle (kosotoxin) of cusso is present only in the female inflorescence. Capsaicin, the most important part of capsicum, is a neutral crystalline principle extracted with benzine or gasoline. The quassins are good examples of neutral bitters. Colocynth has 6 per cent. of the active bitter body colocynthin, which by decomposition yields colocynthein (still more active).

In the botanic sense a gum means any vegetable exudation: as "gum camphor," a stearopten; "gum guaiac," a resin. Chemically speaking, gums are very common vegetable products precipitable by alcohol and transformable into glucose. The acacia type of gums, soluble in water, are compounds of calcium or magnesium and potassium with arabic or gummie acid. The cerasin and bassorin groups are closely related to plant mucilages and pectin bodies. The gummy material of chondrus forms a jelly upon boiling and cooling. Ulmus, cinnamon and buchu have a noteworthy amount of mucilage.

Volatile oils, resins, balsams and camphors are important and abundant constituents of plants. They are closely related (by oxidation processes) and very complex mixtures of compounds. The essential oils (oxygenated compounds) constitute in general the odorous principles of plants; in flowers they are present at the base of glandular hairs. Many consist of a liquid cleopten and a solid stearopten. The terpenes present are not so important physio-

logically as the ketones, phenols, nitrils and thiocyanates. Their antiseptic virtues are due to phenols (thymol, eugenol, anethol, carvacrol). Of frequent occurrence in volatile oils are certain esters, particularly methyl salicylate, linalool, geraniol and benzyl alcohol (balsams).

Fresh enbebs contain 10 to 16 per cent. of ethereal oil. Sassafras bark has about 5 per cent., and sandalwood 2 to 5 per cent. The volatile oil in buchu amounts to 1.5 per cent. from the short leaves; 0.5 per cent. from the long leaves. The volatile oil (ester—0.5 per cent.) of gaultheria is its most important principle. The volatile oil (mostly eugenol and eugenic acid) of cloves is the active principle. Essential oils are especially prominent in peppermint, spearmint, pepper, pimenta, capsicum, cardamom, coriander, anise, star-anise, caraway, fennel, wormseed, vanilla, juniper, saw palmetto, lemon peel and both sweet and bitter orange peel. The pungency of pepper, however, is not due to the oil it contains, but to the alkaloid piperin, which becomes pungent on dissolving; and to the resin chavicin. The ethereal oil of asafetida contains up to 30 per cent. of sulphur.

Resins are often dissolved in volatile oils (oleoresins). They give a characteristic brown or yellowish color to plant products, and tend to darken with age. They are derived partly from retrograde metamorphosis of tannins, cellulose and starch. Resin cells are often lined with cork.

Guaiaec wood is about one-fourth resin acids. The bitter, griping resin contained in senna can be removed by percolating the leaves with alcohol. The active principle of *cannabis indica* is cannabinol, an oily red resin which oxidizes on exposure to air to a black, inactive pitch. The ripe fruit of *podophyllum* is not purgative (contains no resin).

Balsams are marked by the presence of benzylic cinnamate and benzoate (benzoin, 18 per cent. benzoic acid). Balsam of tolu has also vanillin and a little volatile

oil. The gum-resin myrrh contains 2 to 4 per cent. volatile oil, on which its value chiefly depends.

Among the more important camphors, or stearoptens, are camphor, a ketone; thymol, a phenol; menthol, a secondary alcohol; and apiol, from parsley. *Pulsatilla* contains an acid, vesicating camphor which yields anemonin.

Fixed oils and fats (chiefly olein, palmitin and stearin) occur in seeds as reserve material in the protoplasm or as droplets free in the cells. Both sweet and bitter almonds are about half oil and one-fourth proteid; also, in bitter almond, are the glucosid amygdalia (2-3 per cent) and the ferment emulsin. This oil, by maceration and subsequent distillation, yields one-fourth as much hydrocyanic acid, to which its action is due principally. White mustard seed has 25 per cent. of fixed oil; also sinapin sulphocyanid and sinalbin, which, by decomposition, yields an acrid, volatile oil. Black mustard has the same ingredients, except, in place of sinalbin, sinigrin, which, with water, splits into the volatile oil of mustard, a potassium salt and sugar. *Theobroma*, *croton tiglium* kernels and ricinus yield about 50 per cent. of fixed oil; the poisonous ricin is not present in castor oil. *Digitalis* leaves contain about 5 per cent. fat, which is said to delay absorption and irritate the stomach. *Pareira* root has 8 per cent. of fat. Most vegetable oils contain a little cholesterol in various forms.

Waxes are derivatives of the higher aliphatic hydrocarbons, and consist of a combination of acids with alcohols other than glycerin. They form a protective coating on many leaves. The green epidermis of plants contains much waxy cerin, which becomes corky with age.

Starch is the most widely distributed solid substance in the cells of vegetable drugs, but is of no medical importance. There is practically none in acacia, gentian, senega, squill, nux vomica and cinchona, and little, if any, in flowers. There is much starch in ginger (20 per cent.),

althea (35 per cent.), licorice, belladonna and physostigma (48 per cent.). Inulin, which is allied to starch, abounds in the underground portions of the compositae, occurring in solution here; pyrethrum root has 50 per cent., taraxacum (in autumn) 20 per cent. Cetraria contains 70 per cent. of starch-like lichenin. Glucose is present in varying proportions in the larger number of vegetable drugs; invert sugar in fruits and honey. Manna is a sweet exudate from *Fraxinus Ornus*.

The coloring matters of plants are of no direct therapeutic value, and appear to be chiefly benzol derivatives. The brown phlobaphenes, or resinoids, give color to most barks. Color granules are often visible with the microscope—bright yellow berberin in golden seal; red granules in sanguinaria. Some woods (logwood, sautal) contain colorless crystals which turn red on oxidation.

Chlorophyl comprises the blue-green chlorophyl proper and the yellowish xanthophyl. If leaves dry very slowly, oxidases and organic acids change their color to yellow or brown. The bright color is retained by some secret process. The juice of belladonna, after boiling and filtering, remains green; it turns dark and muddy if the boiling is omitted. Red hues (often interchanging with blue) serve as a protection against cold, and frequently appear after wounds of the plant tissues. They are most prominent in plants rich in sugar.

In the disintegration of plants, as in constructive metabolism, the widely distributed ferments (oxidases, diastase, cellulase, lipase, etc.) doubtless play an important role. The odor of a plant, as in belladonna and tobacco, is often developed after its collection. A curious phenomenon, not fully understood, is the gelatinization of certain fluid extracts (red gum, hydrastis, kino, catechu) on standing or in contact with oxidizing agents (potassium permanganate).

According to the writer's count, there are indexed in the eighth decennial revision

of the U. S. Pharmacopeia 157 medicinal plants. While the present revision shows a commendable reduction in the total number of titles, this elision might be carried much further with benefit to all concerned. For example, I find herein 16 plants which owe practically all their value to contained tannic acid. Why should we not restrict these preparations to a much smaller number, or use tannin itself? Given with milk it is tasteless, and is liberated in the intestines, where its action is desired in most instances. By using fewer drugs we should learn to employ them with the confidence and certainty with which the surgeon manipulates his instruments.

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION, PORTLAND MEETING, JULY 11TH TO 13TH, 1905.

Members of the Colorado State Medical Society:

Ladies and Gentlemen—Your delegates to the American Medical Association beg to make report as follows:

The annual meeting of the Association, held at Portland, Oregon, July 11th to 13th, brought together a large and unexpected number of members, 1714 being registered. Many important and interesting papers were presented before the sections, which were all well attended, and the meeting is considered among the most successful in the history of the Association. The profession of Portland was most hospitable and entertained the Association very generously.

The House of Delegates met on the morning of July 10th, the day previous to the general meeting, and during its several sessions transacted much business of great importance to the profession throughout the country. The proceedings of the house are a matter of record, the minutes having been published in the *Journal of the American Medical Association* of July 22d, and thus are accessible to all. It may, however, be of interest to many of our members to have a summary of the most important matters considered and acted upon.

The secretary's report shows that the Association is growing vigorously. During the year there has been a net gain in membership

of 3,951, giving a total membership June 1, 1905, of 19,285.

The trustee's report shows the finances to be in the most flourishing condition. The Association owns its own building in which the Journal is published, the land upon which it stands, as well as some adjoining property to be utilized for future growth, and the extensive and very complete publishing plant. The net assets of the Association are \$212,055.18. The net revenue for 1904 was \$43,465.03. The Association has something over \$50,000 invested in interest bearing bonds, and \$28,795.04 cash on hand and in bank.

The circulation of the Journal during 1904 reached a weekly average of 32,423, a net increase of 15.6 per cent. with a net gain of members and subscribers of 4,695, and 8,500 new names on the mailing list. Of 1,506 registered physicians in Colorado, 538, or approximately 36 per cent., receive the Journal.

After long and careful consideration of the many suggestions made on the subject, the trustees during the past year have established a Council on Pharmacy and Chemistry. Its object is "to investigate all medicinal preparations that are offered to the medical profession and to approve all those that come up to the standard." The council has formulated strict rules for its guidance which will govern all investigations and will publish results in the Journal from time to time, and possibly at a later date the council will very materially assist our profession in eliminating the very numerous worthless nostrums offered to it, and by informing physicians of the composition of pharmaceutical preparations offered to them, enable them to select those of value, and exercise an individual judgment in their application.

It is the intention of the trustees during the present year to appropriate practically all the profits of the Journal to various objects to advance the interests of the profession of the country at large, such as the Council of Pharmacy, Council of Medical Education, Committee on Legislation, and for the advancement of science.

The agitation for keeping the pages of the Journal clean and free from the advertisement of nostrums and other objectionable matter, resulted in the passage of a resolution that all remedies favorably reported upon by the Council of Pharmacy and Chemistry, and advertised in the Journal, should be accom-

panied by the formula, and this will be enforced on the termination of all present contracts.

The work and correspondence of the Committee on Legislation has become so extended that the house authorized the establishment of a bureau in Chicago with a permanent secretary, and this work will be carried on with more vigor in the future.

The very efficient Council on Medical Education reported most satisfactory progress. During the year a meeting was held in Chicago with delegates from state and territorial licensing bodies, representatives from the associations of medical colleges, from the government medical services, and men representing colleges of liberal arts.

"The general opinion of this conference seemed to be that such a body as the council representing the American Medical Association might be the nucleus about which could be drawn the other important bodies interested in elevating medical education." By such united action it is expected much can be accomplished for the betterment of standards of medical education, and the official expression of the desires of the medical profession in these matters. The council has already formulated a standard of requirements for medical education, and believes the time is ripe for the acceptance of the broad principles outlined, and for the discussion of reciprocity between state licensing boards. The council expresses the opinion that with a determined effort these requirements may be generally adopted within two years, and that they may be made effective January 1, 1908. In order to advance this most important work and attain this most desirable result, the house authorized the establishment of permanent headquarters in Chicago with an active, paid secretary, Dr. George W. Webster.

The Committee on National Incorporation reported that they had presented to congress the petition for a national charter for the American Medical Association from medical men in all parts of the United States. After some alterations the bill of the committee was introduced and referred to the proper committees. The bill was reported to the house, but, owing to the desire of some members of the Judiciary Committee of the senate to investigate the matter further, and the press of important matters of legislation, the bill was not reported from this committee and

failed of passage. A further effort will be made at the coming session to have this most desirable legislation enacted.

It was proposed last year that a Blue Book should be issued under the authority of the American Medical Association, which should contain only the names of members of the Association and its allied societies. On mature consideration this movement was abandoned as unwise, and in its stead the house ordered that a general directory of the medical profession of the United States be published under the auspices of the Association. It is proposed to make this directory as complete as possible, indicating by some device the member of the American Medical Association and all allied state, county and district societies. The material is now being collected with the hope that it may be published next spring.

The Association is now so large, and brings together so many members as to be a heavy burden upon the cities selected for the annual meetings. Although the expenses of these meetings, and of the elaborate entertainment offered to the Association have been willingly borne in the past by the cities in which the meetings have been held, yet the finances of the Association are in such a prosperous condition that it is deemed improper to further tax any city for the necessary expenses of the annual meeting, and in future the Board of Trustees will have full control of the arrangements for all meetings and bear the expense.

The next meeting of the Association will be held at Boston at a date not yet determined.

Respectfully submitted,

P. F. GILDEA,

W. A. JAYNE,

Delegates.

COUNTY MEDICAL SOCIETIES.

Pueblo.—Regular meeting of society held in McClelland Library, September 19, 1905. Members present—Drs. W. T. H. Baker, Dorland Vertel, Corwin, H. A. Black, Williams, Robe, Stoddard, Bulette, Inglis, Mohlan, Hoch, Rich, Elder and Keeney.

Drs. Dillingham and Anna Cross were elected to membership.

Dr. R. W. Corwin read the paper of the evening, entitled, "Infectious Osteomyelitis." The essayist limited his remarks to so-called

spontaneous osteomyelitis, hematogenous in origin.

After a discussion of the etiology of this condition the diagnosis was considered at length.

The treatment was disposed of in one word—drainage.

The reading of the paper was followed by general discussion by the members present.

Society adjourned to meet again October 17.

MADISON KEENEY, Secretary.

Denver.—The Medical Society of the City and County of Denver met in the Academy of Medicine Hall, September 19, 1905, the first meeting after the summer adjournment.

Dr. M. R. Root read the paper of the evening on **rupture of the lung**, caused by the patient being caught between a car of coal and the entrance to a mine. Immediately emphysema of the upper part of the chest, the neck and face, occurred. Though suffering great pain and laboring under an intense desire to cough, he raised no blood through the entire course of the injury. Dulness over the base of the left lung developed within two hours. Moist rales were noticed along the mediastinal line, and in twenty-four hours considerable bronchial discharge, but no blood. Shortness of breath and drawn expression of the face were very noticeable. No fracture could be determined. Adhesive straps were applied over the emphysematous area. The inclination to cough was controlled by opiates. On the evening of the second day the dulness at the base of the left lung began to diminish, and every indication of lessened congestion began to appear, and the emphysema to subside. The cough became less annoying, and the dyspnea diminished considerably. He was discharged from the hospital on the twentieth day. The patient next reported six months later. His only complaint was some shortness of breath, and a painful sensation in the apex of the left lung, on exertion. A tearing sensation was also felt here on coughing. He had made a good recovery, with but slight evidence to the examiner of the severe trauma that he had received.

Dr. J. N. Hall reported a case of **bronchopneumonia**, with glands the size of a chestnut in the neck. Dyspnea was so great that breathing was audible across the room. The right bronchus was so pressed upon that but little air could enter, three-fourths of the

breathing being done by the other lung. The enlargement of cervical glands after broncho-pneumonia is probably due to the germs of this disease, and is different in pathology from tubercular gland-swelling. Treatment by cod liver oil, iodide of iron, and nourishing diet gives good results and renders the prognosis quite favorable.

Dr. F. P. Gengenbach reported a similar case that had been diagnosed adenoids and enlarged tonsils, in which the same line of treatment resulted in recovery. Attention was called to the fact that the cough of broncho-pneumonia is characteristic, resembling whooping cough without the whoop.

Dr. John Boice reported four cases of hemorrhagic diathesis: 1. After extraction of a tooth, persistent hemorrhage from the cavity and cheek occurred. The cavity was plugged and collodion applied to the cheek. This checked the hemorrhage, but death occurred in about thirty hours. 2. Extraction of tooth. Cavity plugged. Death the same day. 3. Sliver in the hand. Dressed. Next day a slough about the size of a quarter came off. Tincture of the chloride of iron was given and tannin applied. The following day two-thirds of the back of the hand sloughed. Then the thermocautery was applied at dull red heat, followed by a dressing of absorbent cotton. Recovery. 4. Operation for goitre, followed by persistent bleeding in spite of general ligation. Applied adrenalin on three successive days. Recovery.

Dr. A. G. Case reported a family of "bleeders," in which there were two deaths from trifling wounds. A third member of the family had a tooth extracted. Plugging failed to check the hemorrhage, but a tablespoonful of turpentine every two hours controlled it in twenty-four hours. The same patient had a similar experience at a later period.

Dr. S. Simon had seen two cases of severe bleeding nine or ten hours after ritual circumcision, although adrenalin had been used. He also reported a case sent here from New York with a diagnosis of pulmonary tuberculosis, which the patient had; but he was also found to be suffering from empyema slop, the insertion of a trocar bringing out a slop jar full of pus.

Dr. Mary Hawes reported the case of a woman, aged 67, who had suffered from la grippe and pneumonia, followed by empyema. There

was severe pain in region of liver, fever, and abundant discharge of pus from the bowels. There was dyspnea and the apex beat was one-half inch to the right of the sternum. Autopsy showed the right lung absent, the heart in the right chest, the rest of the space being filled by inflammatory exudate. The parietal pleura was adherent, as also the diaphragm to the liver.

Dr. A. S. Taussig had seen a case that day in which a diagnosis of "cramps" had been made two days before, and morphine given for relief. This day the patient went down town but was brought home, felt comfortable in bed but thought he was dying. He was found to have a typical appendicitis, and was immediately operated. Result unknown.

Dr. G. W. Miel reported a case of lung traumatism due to blow by engine tender in passing. Death occurred from profuse subcutaneous hemorrhage, in about six hours, operation seeming inadvisable.

Discussion as to the regulation of the sale of poisons in Denver was participated in by members of the society.

At the request of Dr. Hall an informal vote as to the advisability or inadvisability of reporting to the board of health all cases of tuberculosis, was taken. The vote resulted in favor of reporting all cases, providing the health commissioner should have no authority to touch such cases.

Voted to express appreciation of the stand taken by the "eight sell-right druggists" of Denver.

Dr. A. E. Bonesteel was elected a member of this society. G. F. L.

The Otero County Medical Society met at La Junta, September 12, with the following members present: Drs. Moody, Kearby, Moore, Hall, Sigman, Stubbs (Jesse), Kearns, Edwards, Finney, Donlon and Brown.

The meeting was addressed by Dr. J. N. Hall, professor of practise of medicine, Denver-Gross Medical College. Subject, "Empyema."

Dr. Hall's paper was written in his usual graphic style. At the conclusion of the meeting the society extended to Dr. Hall a vote of thanks for his kindness in making so long a journey to appear before them.

Drs. Farthing, Reed and Brown, all of La

Junta, and B. E. Moody, of Rocky Ford, were elected to membership.

A communication from the Weld County Medical Society in reference to petitioning the board of medical examiners to use the authority granted to them under the new law, of requiring a written examination from all applicants for a state license, was brought before the meeting. The society decided that no hardship ought to be placed on a man who already has a license to practice in another state, from entering practise in this state, and the secretary was ordered to inform the secretary of the Weld County Medical Society that this society would accept a resolution reading: "That the board of examiners shall exercise their full power and prerogative of requiring a written examination from each and every candidate for state license, provided said candidate has not prior to his application to the Colorado board received by examination a license from a state examining board, with requirements equal to Colorado statutes."

The society adjourned, to meet at La Junta, the second Tuesday in November, the meeting in October being set aside on account of the session of the state society.

E. GARD EDWARDS, Secretary.

Garfield.—The regular meeting of the Garfield County Medical Society met at Glenwood Springs, September 19th. The following members were present: Drs. W. J. Le Rossignol, of Rifle; W. G. Lockard, of New Castle; J. M. Braden, of Carbondale; A. E. Gill, of Basalt, and W. W. Crook, Theo. Hotopp, W. F. Berry, L. A. Robinson, W. C. Forster, of Glenwood Springs.

Dr. Gill reported an interesting case of apoplexy, and Dr. Braden read a paper on Spotted or Tick Fever, four cases having come under his care during the summer.

The annual election of officers was held and Dr. W. G. Lockard, of New Castle, was chosen president; Dr. W. W. Crook, of Glenwood Springs, vice-president, and Dr. L. A. Robinson, secretary and treasurer. Dr. Crook entertains the society at his residence at the next meeting on November 9th. It was agreed upon that each member must read a paper at every meeting. Time limited to ten minutes on each paper.

L. A. ROBINSON, Secretary.

Weld.—The regular meeting of the Weld County Medical Society was held in Dr. Pogue's office, Monday evening, September 25, at eight o'clock, with the president in the chair, and a large attendance of members and visitors.

Dr. Barret spoke of the frequency with which he had met goitre in his routine examination of girls at the State Normal, twenty cases during the past session.

Dr. Call reported a case of masturbation in a female child aged sixteen months, considerable improvement had followed upon loosening the clitoris, which was somewhat adherent, from the surrounding tissues. The seances were now reduced in frequency, occurring three or four times daily.

Dr. J. K. Miller, the leader of the evening, read a carefully prepared paper, entitled the Medical Kidney, based on his clinical and microscopical findings in eleven cases of pathological kidney, which had come before him during the past three months in regular practice. Dr. Miller laid particular stress on a careful microscopic examination of the urine for tube casts, as opposed to a simple chemical examination, for albumen. Most of his cases had been marked by absence of albumen, and the presence of casts. Discussion of the paper was general and somewhat spirited., Drs. Graham, Call, Ringle, Hughes, Church and Miller taking part. For the most part these members were, more or less, strenuously opposed to the theory that Bright's disease could be diagnosed by means of the microscope, that casts alone, albumen being absent, presented salient and satisfactory evidence of a diseased condition. Dr. Church quoted Cabot, whose opinion was that color, specific gravity, amount passed in twenty-four hours, and arising frequently at night, were the essential points.

Dr. Miller, in reply, defended his position. His opinion, Weld County lights to the contrary, was that where casts were present there existed a diseased condition.

Endorsements of the stand taken by the Weld County Society, outlined in the resolution passed on the evening of August 28th, were received from Glenwood Springs, Montrose and La Junta, representing their respective County Societies.

A communication from Dr. Van Meter was likewise read, which in nowise commended the Weld County Society for their intelligence,

great learning, or advanced professional spirit. That our ideas on this subject were antiquated, erroneous and absurdly inadequate, was forcibly called to our attention; and that we above all, lacked equity and good judgment; finally the practicability, as well as the correctness of our interpretation of the law, received but slight commendation.

In discussing the communication, Dr. Graham deplored the fact that Colorado was rapidly becoming a professional dumping ground. He agreed that the ideas promulgated by the secretary of the examining board were of a high standard, but unless generally applied would not enhance the professional standard of Colorado. We and our families would become a martyr to high ideals, and the public would not be benefited thereby. At the same time reciprocal relations with other states would be impossible.

Dr. Church quoted several legal authorities who had given an interpretation of No. 3 of the State Medical Law in accordance with our resolution (that the board had the power to create a stringent, a minimum of educational requirements as they saw fit, and thereby cause an absolute necessity for examination, as none would come up to the standard). He thought that the majority of the physicians of this state favored an examination before receiving a license to practice medicine; and that there certainly had been a general impression among the physicians that the purpose of the new law was to secure such.

Drs. Call, Hughes, Ringle and Miller also voiced similar sentiments with considerable enthusiasm. The resolution was accordingly left unaltered, for the committee to deal with as its terms directed. The meeting adjourned at 11 p. m.

CHARLES B. DYDE, Secretary.

BOOKS.

The Pharmacopoeia of the United States of America. Eighth decennial revision. Official from September 1, 1905. Cloth, 692 pages. Price, \$2.50. Philadelphia agents, P. Blakiston's Sons & Co.

The appearance of this work marks a distinct advance in the systematic and uniform classification of medicines. The committee has labored long and hard to place before the

medical and pharmaceutical professions a list of standardized preparations of known value to our most able American physicians. The variance of European pharmacopoeias, ambiguity in titles, changes in botanical genii, and the proprietary coined names applied to popular and previously unofficial remedies have warranted the many changes to be noted in the last revision.

The table of contents is followed by the usual "Historical Introduction," an interesting record of the facts incident to the formation of the first pharmacopoeia and its subsequent revisions.

An abstract of the proceedings of the Eighth Decennial Convention, including a list of the delegates, is next incorporated.

The preface is devoted to restrictions, standards of purity, strength of preparations and the attitude of the committee in recommending the suggested changes, which is clearly and concisely stated.

Here also is mentioned that in the sense of the committee there was a necessity for more accurately defining the limit of purity in official chemical substances and that there has been added what is termed a "purity rubric," which is placed immediately beneath the title in large type and usually in the following language: "Not less than — per cent. of pure salt."

There are 958 articles in the text—as compared with 994 in the 1893 revision—155 test solutions and volumetric reagents, 149 volumetric and 35 gravimetric assays. In the introductory notes fineness of powder, processes, specific gravity, metrological equivalents, etc., are defined, with reference to their use in the work.

The usual list of articles "added to," those "dismissed from" and "changes in titles," are followed by a valuable table showing the comparative strength of preparations in previous and the present pharmacopoeia.

Most important to the physician are the changes in the strength of certain tinctures, changes in nomenclature and the titles adopted for the synthetic remedies added, which are in common use under trade names. All potent tinctures are now ten per cent., of which the following is a list, with the previous percentage strength in parentheses: Aconite (34), Belladonna (15), Benzoin Compound (12½), Cannabis Indica (15), Cantharides (5), Capsicum (5), Colchicum Seed

(15), Digitalis (15), Gelsemium (15), Hydrastis (20), Hyoscyamus (15), Squill (15), Stramonium (15), Strophanthus (5), Veratrum Viride (40).

Noteworthy changes in nomenclature are: Fluidextractum, in one word, replaces Extractum—Fluidum. Catechu is official as Gambir, Acidum Carbolium as Phenol, Acidum Chromicum and Acidum, Arsenosum as Chromii Trioxidum and Arseni Trioxidum, respectively. The last two mentioned, however, will probably not be accepted with approval, since as anhydrous acids the former title is not incorrect, though more explicit, chemically.

The titles adopted for synthetic preparations are given below with the familiar trade names in parentheses:

Acetphenetidinum (Phenacetine), Aethylis Carbamas (Urethane), Antipyrina (Antipyrine), Benzosulphinidum (Saccharine), Chloralformamidum (Chloralamid), Guaiacolis Carbonas (Duotol), Hexamethylamina (Urotropine, Cystogen, Hexamin, Formin, Formamin, etc.), Iodolum (Iodole), Methylthioninae Hydrochloridum (Methylene Blue), Sulphoethylmethanum (Trional), Sulphomethanum (Sulfonal), Thymolis Iodidum (Aristol), Vanillinum (Vanilline), Bismuthi Subgallas (Dermatol).

Deserving of mention are some of the new galenical preparations: Catapalsma Kaolini is a clay-glycerine poultice comparable to Antiphlogistine, Anhydrosine, Glykaolin and others. Pil. Laxativae Co. is the popular Aloin, Belladonna, Strychnia and Ipecac laxative pill. Liquor Antisepticus is a solution of boric and benzoic acids with thymol, wintergreen, etc., known by a variety of coined names suggesting the name of Lister. Liquor Sodii Phosphatis contains a gram of phosphate of soda to a c.c. of solution with 4 per cent. of nitrate of soda.

Serum Antidiphthericum is recognized, and "the standard of strength expressed in units of antitoxic power, should be that approved or established by the United States Public Health and Marine Hospital Service." Thyroid and suprarenal gland are made official.

All titles are, as heretofore, arranged alphabetically and the incorporation of the average dose in metric and ordinary systems adds to the value of the work. The following declaration is made with reference to doses: "That neither this convention nor the committee of revision created by it, intends to have these doses regarded as obligatory on the

physician or as forbidding to exceed them whenever in his judgment this seems advisable."

The appendix is devoted to reagents, test and volumetric solutions and is followed by a list of elements and principal pharmacopoeial chemicals and the usual gravimetric and thermometric tables carefully revised.

The index is very complete, and there has been added the English synonyms—previously mentioned under the titles—and rendering it more serviceable for reference.

The typographical work is exceedingly good.

It may be well to suggest, in conclusion, that a little time might profitably be devoted to the study of the contents of this volume, and many physicians will be surprised to find official a number of preparations which might more properly be designated "U. S. P." than "A. Z. & Co.'s." In fact, the majority of the profession may be said to be indifferent with reference to this subject and the ignorance as to that which is and that which is not official is altogether too prevalent.

The present revision, more than any of its predecessors, deserves a place in the library of every practitioner of medicine where it will prove a great aid in the careful, modern and ethical medicinal prescription writing.

G. A. M.

NEWS NOTES.

Dr. F. Finney, president of the State Society, spent his vacation in California.

Dr. E. W. Ragsdale, La Junta, is convalescing from a severe attack of typhoid.

Drs. Chas. Farthing, W. W. Reed and Jack Brown have located at La Junta.

Dr. B. F. Haskins, the senior member of the profession at La Junta, recently sustained a colles fracture of the right arm.

The La Junta Sanatorium Association recently purchased a tract of five acres of land lying south of the town, for the site of its hospital and tubercular tent colony. The view from the site is the best in the region. Plans will be drawn within the next thirty days for the buildings.

Dr. Brown, of Harrisonville, Mo., has charge of the practice of Dr. E. W. Ragsdale, of La Junta, during the absence of the latter in California, where he is recuperating for a brief time.

Colorado State Medical Society

Next Meeting at Denver, October 2-3-4, 1906.

CONSTITUENT SOCIETIES:

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month..G. H. Cattermole, Boulder
Denver County, first and third Tuesday of each month.....
.....T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association, G. B. Bilborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, Septem-
ber and November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, Septem-
ber and November.....L. A. Robinson, Glenwood Springs.
Las Animas County, first Friday of each month....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month...E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....
.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....
.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, First and Third Tuesday in each month.....
.....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July
and OctoberH. C. Turrell, Durango
San Luis Valley, next meeting in May.....A. R. Pollock, Antonito
San Miguel, third Saturday in each month.....I. R. Bancroft, Telluride
Teller County, fourth Tuesday in each month....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

Colorado Medicine

THE OFFICIAL ORGAN OF THE COLORADO STATE MEDICAL SOCIETY AND CONSTITUENT SOCIETIES
PUBLISHED MONTHLY BY THE SOCIETY

OFFICERS FOR 1905-6

H. G. WETHERILL, *President* MELVILLE BLACK, *Secretary* S. E. SOLLY, *Treasurer*

PUBLICATION COMMITTEE

JAS. M. BLAINE, *Editor* J. N. HALL EDWARD JACKSON

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CHANGE OF ADDRESS

Our exchanges and those wishing to correspond with COLORADO MEDICINE will please note that the address has been changed from 1434 Glenarm St. to Room 3 Steele Block.

Entered January 20, 1905, at Denver, Colorado, as Second-Class Matter, under Act of Congress of July 16, 1904.

PRESS OF THE REED PUBLISHING CO., 1756 CHAMPA ST., DENVER.

Colorado State Medical Society

The Next Meeting Will Be Held at Denver
October 2-3-4, 1906.

OFFICERS.

President:

H. G. Wetherill, Denver.

Vice-Presidents:

First, E. T. Boyd, Leadville; Second, Perry Jaffa, Trinidad;
Third, C. A. Ringle, Greeley.

Secretary:

Melville Black, Majestic Building, Denver.

Treasurer:

S. E. Solly, Colorado Springs.

Board of Councillors:

Term Expires:

1906—P. J. McHugh, Fort Collins; E. J. A. Rogers, Denver.
1907—J. N. Hall, Denver; Hubert Work, Pueblo.
1908—C. F. Gardiner, Colorado Springs; S. D. Hopkins, Denver.
1909—J. T. Melvin, Saguache; W. W. Reed, Boulder.
1910—Frank Finney, La Junta; E. T. Boyd, Leadville.

Delegates to American Medical Association:

Term Expires: Delegates:

Alternates:

1906—P. F. Gildea, Colorado Springs; H. A. Black, Pueblo.
1907—Hubert Work, Pueblo; H. R. Bull, Grand Junction.

COMMITTEES.

Publication Committee:

Term Expires:

1906—J. N. Hall, Denver.
1907—J. M. Blaine, Denver.
1908—Edward Jackson, Denver.

Scientific Work—Dr. J. N. Hall, Denver; Dr. Will H. Swan, Colorado Springs;
Dr. Melville Black, Denver.

Public Policy and Legislation—Dr. Sherman G. Bonney, Denver; Dr. Charles B. Dyde, Greeley; Dr. R. W. Corwin, Pueblo. Ex-Officio: Dr. H. G. Wetherill, President; Dr. Melville Black, Secretary.

Auditing—Dr. J. C. Chipman, Sterling; Dr. E. H. Robertson, Boulder; Dr. F. Gregory Connell, Salida.

Credentials—Dr. Melville Black, Denver; Dr. E. E. Evans, Fort Morgan; Dr. Dryden Johnson, Antonio.

Necrology—Dr. E. Stuver, Fort Collins; Dr. Minnie C. T. Love, Denver; Dr. J. G. Espey, Trinidad.

COLORADO MEDICINE

PUBLISHED BY THE COLORADO STATE MEDICAL SOCIETY

VOL. II

DENVER, NOVEMBER, 1905

No. 11

EDITORIAL COMMENT

PRAYER VS. PILLS.

Recently there was added to the Oakes Sanatorium of Denver a home for nurses. Judging from the description as given by *The Denver Evening Post*, the home is elegant in all its appointments and admirably adapted to the purpose for which it is intended.

The Rev. John H. Houghton in his dedicatory address gave vent to the following: "I am heartily in favor of nurses; they do even more good than the physician. But one thing in that connection which has always aroused me is the fact that ministers are not allowed in the sick room by the physicians. A minister can do a sick person more good than all the pills and medicines any physician ever poured down one's neck, and I want all you nurses to remember this and get us in to see the sick every time we come here."

At first sight one might jump at the conclusion that the Rev. John was merely wanting to dole out spiritual consolation and see that the patient was properly ticketed for his final journey, but on second reading we note that he puts up his prayers against the physician's "pills and medicines" and claims a less mortality for his plan of treatment.

In future when our medical friends who have patients in this institution report rapid progress we will suspect that they are getting assistance from the benedictions of the rector of St. Mark's.

To treat the subject more seriously, however, one might be inclined to call this instruction to the nurses a huge joke, were it not for the fact that only a few months

ago this same gentleman attempted to start a prayer clinic right under the sacred dome of St. Mark's. His excuse was that many of his flock were seeking relief from Christian Science and in order to keep them kneeling at their own shrine he proposed a plan at once unique and grand, a plan that would have out-Mary'd-Mary had it not been sidetracked by the Bishop.

He proposed that every patient should be treated by some one who had demonstrated great skill in relieving special cases, so that each patient would have the services of a specialist skilled in some variety of unseen and mysterious healing.

If all ministers were built along these lines it would be little wonder if physicians should bar the door against their admission. There is in many cases a turning-point where a word or even a look will cause the patient to lose heart and relax his hold on the struggle for life, and the entrance of the minister or the sympathetic friend is often suggestive of dissolution.

In all cases the competent physician who enjoys the confidence of the family and patient is the proper one to say when to admit the minister or the undertaker.

ETHICAL OR OTHERWISE?

As we go to press our attention is called to an article in the *News* of November 10th about an operation which is to be performed to-day in the Denver City and County Hospital. The article declares in flaring headlines that the operation of skin-grafting will be performed before a very large class of students.

From a professional standpoint we fail

to see the necessity of informing the public about every operation performed in the Denver hospitals, and certainly if we were reading such notices from the standpoint of a lay reader we would be unable to determine just who was to receive the most benefit from said *grafting*, the patient, the students or the operator.

The pages of COLORADO MEDICINE are open to the profession for reports of all cases that would interest or instruct its readers, and there is no necessity to resort to the daily press to spread these everyday cases before the wondering gaze of the medically uneducated masses.

The editor will keep his ear to the ground and await the action of the board of censors.

PROCEEDINGS

THIRTY-FIFTH ANNUAL MEETING OF THE COLORADO STATE MEDICAL SOCIETY, COLORADO SPRINGS, COLORADO.

MINUTES OF THE HOUSE OF DELEGATES.

Meeting called to order at the Sun Room, Antlers Hotel, Monday, Oct. 2, 1905, at 8 o'clock, by the President, Dr. Frank Finney.

Upon roll call the following delegates were present:

Boulder County—E. B. Queall, J. H. Cattermole.

Denver—J. N. Hall, Melville Black, T. M. Burns, Edward Jackson, W. A. Jayne, E. W. Stevens, S. Simon, John Chase.

El Paso County—H. W. Swan, P. F. Gildea.

Fremont County—W. T. Little.

Las Animas County—J. G. Espey.

Montrose County—Carl Johnson.

Otero County—Jessie E. Stubbs.

Pueblo County—H. A. Black, C. Epler.

Weld County—C. H. Call.

There being a quorum present the meet-

ing was declared organized and ready for the transaction of business.

Moved by Dr. Blaine, duly seconded and carried, that the minutes of the last regular meeting as printed in COLORADO MEDICINE be adopted.

REPORTS OF OFFICERS.

DR. BLAINE (Secretary).

Mr. President and Gentlemen:

I will have to beg the indulgence of the Society for not having a written report this year. It is usual to wait, before preparing this report, until I have all the reports from the constituent societies. There are two societies that have not yet reported, and I waited until the last minute for them, and they did not get in, hence my report will be more or less extemporaneous.

Boulder County this year reports a membership of 40, the dues of all of which are paid.

Delta County reports a membership of 12.

Denver County, 197.

Eastern Colorado, which is the only new Society organized this year, comprising the three Counties on the Burlington line, Morgan, Washington and Yuma, have organized there to meet four times a year, at Yuma, Akron, Brush and Ft. Morgan. They have a Society of 12 and everything promises that they will have an active society there. They have had all of their meetings regularly since last January. I was out at their April meeting helping them to complete their organization, and they mean business.

El Paso County reports 51 members paid.

Fremont County reports 19.

Garfield County, 13.

Lake County, 17.

Larimer County, 20.

Las Animas reports 25.

Mesa County, 12.

Montrose County, 6.

Northeastern Colorado, organized at Sterling last year, has a membership of 5; and I believe that is all that is accessible, but they stick together.

Otero County, 20.

Ouray County reports a membership of 5, which I believe is every one eligible in the County.

Pueblo County reports a membership of 40.

San Juan and La Plata have not yet reported.

San Luis Valley has a membership of 17.

San Miguel has a membership of 6.

Teller County has a membership of 20.

Weld County has a membership of 19.

This makes a total reported membership of 556, which nets the sum of \$1,668.00

This, I think, is sufficient for a Secretary's report. There is only one point in the State in which a Society could be organized, and an attempt was made last year to organize in the Clear Creek Valley. They held one or possibly two meetings and apparently disbanded because I never could get any more information from them. I thought last year that there should be a Society at Salida and I wrote to several of the physicians there, but they thought it was impossible to maintain a Society, so most of them have gone to Lake County and joined there. The same is true up at Breckenridge. I tried to get enough up there to form a society but they have gone down to Lake County. So the State is pretty well organized now, with the exception of the Clear Creek Valley. There ought to be a society that would take in the men at Idaho Springs, Georgetown, Empire, Central City and Black Hawk, but as I say, they made an effort and fell down.

Moved by Dr. Jayne that the report be received and placed on record. Seconded and carried.

Owing to the absence of the Treasurer his report was laid over.

REPORT OF COMMITTEES.

Dr. Jackson, Chairman of the Publication Committee, presented the following report:

Report of Publication Committee.

Since the last annual meeting twelve numbers of COLORADO MEDICINE have been issued, comprising in all 368 pages. Of these 48 pages have been devoted to advertising, and to covers upon which various lists and announcements of current interest were printed. Of the remaining 320 pages, comprising the body of the journal, 170 pages have been devoted to publishing papers read before the last annual meeting of the State Society, with its minutes, the proceedings of the House of Delegates, reports, etc. Ninety pages have been given to the reports of the County Societies and the papers read before them. Reports of other medical societies, including the American Medical Association, have comprised 23 pages. Editorials, reviews of books, etc., occupied 37 pages, these being the work of 14 writers. The number of volumes received for review, and subsequently noticed in the journal, has been 47.

With the completion of existing advertising contracts in December, 1904, all advertising matter was excluded, and the journal secured entry as second class matter, under the Act of July 16th, 1904, applying to periodicals without general advertising. The advertising had yielded about \$14.00 per month. The saving in postage secured by second class entry is about \$10.00 per month.

At the beginning of the year we were met by an increase in the cost of publication of somewhat over 10 per cent. In spite of this the expense to the Society has been kept within the appropriation made last year. The bills for printing and second class postage amounted to \$974.90.

For additional postage, including the postage and delivery in Denver through the year, and addressing of wrappers, \$88.85. For electrotypes, \$24.75. For certified copy of the Charter of the Society obtaining second class entry, \$2.50. Total, \$1,091.00.

On the other hand there was collected for advertising \$150.25, making the net cost of the journal to the Society, including the Editor's salary, \$1,240.75. It is believed that under present conditions this is as small an expense as we can hope for in the publication of such a journal.

Your Committee feel that the present policy of publishing the journal without **any advertising matter** gives it a dignified position distinctly higher than that of the mass of medical periodicals, and worthy of an earnest, independent, scientific body. If, however, it is desired to offset the expense by the admission of advertising matter, to obtain second class entry at the P. O. under the law applying to periodicals that publish advertising, it will be necessary for the House of Delegates to amend the by-laws so as to designate a certain sum, say \$2.00 per year, of the total received from each member as a subscription to the journal. Such action, it is believed, would meet both the letter and the spirit of the postal laws, permitting the printing of advertisements without sacrificing the advantage of the one cent per pound rate for postage.

EDWARD JACKSON, *Chm.*
C. E. EDSON.

DR. JAYNE: As the publication of our official journal is one of the most important details of business with which this House has to do, I do not know that I am sufficiently familiar with the subject to discuss the matter at the present time, and possibly others of the House of Delegates feel the same way. I believe that this matter of the journal and its future policy along the lines of the sug-

gestions of the report and possibly on other lines might very profitably be taken up by this House and considered at length, and in order that this matter may be presented to the House in a definite manner, I move that the President appoint a committee of three as a committee of reference to which this report and the subject of the publication of the journal, and its policy, shall be referred for investigation and consideration and to report not later than Wednesday morning.

Seconded and carried.

The President appointed as such committee Dr. Jayne of Denver, Dr. Little of Canon City and Dr. Swan of Colorado Springs.

Dr. Blaine presented and read the following communication from the Reed Publishing Co., of Denver:

THE COLORADO MEDICAL JOURNAL.

September 29, 1905.

J. M. Blaine, M. D.,

Secretary Colorado State Medical Society, Steele Block, City:

Dear Doctor:

Since we bought the *Colorado Medical Journal*, we have been frequently asked if any proposition was to be made by us to the forthcoming meeting of the Society at Colorado Springs, bearing on the question of COLORADO MEDICINE, and the publication of the Transactions in book form, as was formerly done. These queries have led us to believe that perhaps some proposition of mutual advantage would be acceptable to the Society.

We therefore submit the following:

(1) If the Society will give us exclusive use of the papers to be presented at the next annual meeting, the same as they have been doing with COLORADO MEDICINE, we will publish and bind the same in full linen cloth, under the supervision of the Secretary of the Society, in identically the same form in which it was formerly printed and bound, without

charge to the Society, furnishing the Society 100 complete copies of same, without charge (for the use of its officers, exchange purposes with other societies, etc.), we to furnish copies of said Transactions to any member of the Society in good standing, who may desire same, at \$1.00 per copy. This proposition does not contemplate preventing the publication of the papers above mentioned in COLORADO MEDICINE if said publication is continued, nor delaying the publication of the Transactions till the end of the year—but the early publication of the same.

(2) Should the Society desire to curtail the expense of printing COLORADO MEDICINE, we would consolidate the same with our journal, all matter contained in said journal to be under the supervision of the Publication Committee of the State Society, providing either the Secretary of the State Society or our Consulting Editor, T. Mitchell Burns, M. D., be placed upon your Publication Committee.

Believing that ethical advertising pages are almost as important as ethical scientific pages to the modern medical magazine, we would suggest that the Secretary of the Society and our Consulting Editor be selected as a Board of Censors to pass upon all advertising matters.

Should the State Society desire to send such consolidated magazine to each member of the State Society, we would furnish same at a fraction over 4 cents per copy, or 50 cents per year, as against a cost of 21½ cents per copy, as at present. In addition to this, the membership would receive a journal of 80 or more pages, instead of 16 or more pages, and the total cost to the Society would be:

600 annual subscriptions for present membership	\$ 300
Salary of Editorial Member of Publication Committee	300
Total	\$ 600
Saving to Society	1,200

(3) Reprints. Should either or both of the above propositions be accepted, we would agree to furnish reprints of the papers at the same price charged by us in 1902, notwithstanding there has been an advance in the price of printing of fully 15 per cent. since that period.

We have just completed the formation of our Editorial Staff for the coming year, which comprises about 75 of the most prominent members of the Society in the State, which staff would work in conjunction with your Publication Committee. We mention this fact to indicate that it is to be the policy of The Reed Publishing Company, who are now the sole owners of *The Journal*, to not confine ourselves to the papers of the State Society in case they should accept the above, but that we propose to give the profession the opportunity of supporting a big, strong, ably-edited magazine, every issue of which will be full of good things of general interest to the membership, and we desire to assure you, and through you the State Society, that whether or not you should desire to accept any or all of the propositions herein outlined, and whether or not the State Society should consider it desirable to continue the publication of COLORADO MEDICINE independently, the *Colorado Medical Journal* will always be found willing and anxious to aid the Society and its officers in any way possible.

Cordially yours,

THE REED PUBLISHING COMPANY,

By H. J. Reed,
Pres't and Mgr.

P. S. Should the State Society desire as many as 600 copies of the Transactions we would furnish same at \$300, with the privilege of publishing the papers in the *Colorado Medical Journal*.

Without the latter privilege it would cost approximately \$1.00 per copy, or \$600.

H. J. REED.

The President ordered the above com-

munication referred to the special committee above appointed.

The Committee on Scientific Work offered as the result of their work the program.

Dr. Blaine moved that the House of Delegates authorize the President and Secretary to grant a charter to the Eastern Colorado Society.

Carried.

As the Chairman of the Committee on Public Policy and Legislation was not present, the report was deferred.

Report of Committee on Necrology ordered to be read before the full Society.

Dr. Jayne, Chairman of Committee on Organization, read the following report:

REPORT OF COMMITTEE ON ORGANIZATION
TO THE HOUSE OF DELEGATES,
1905 MEETING.

To the House of Delegates:

Gentlemen—In pursuance with the objects of its appointment at the last annual meeting your Committee on Organization in November, 1904, addressed a circular letter to the President, Secretary and members of each constituent medical society in Colorado.

This letter explained briefly the plan of organization of our National, State and County Societies, their intimate correlation, and called attention to the fact that, with a view of remedying certain defects noted in the operation of our organic laws and enabling the several societies to co-operate more effectively in forming a successful State Society, our by-laws had been revised and revision of the constitution had been passed by this body subject to adoption at this 1905 meeting. It was also urged that the relations of the County and District Societies with this central body should be intimate and cordial, and in order that their officers might co-operate promptly and without friction the

adoption of certain uniform rules by all constituent societies was necessary.

To this end your Committee formulated the following recommendations and advised that they be adopted and incorporated into the laws of each society if not already contained therein:

"1. That the annual meeting and election of officers be held in January of each year, and as soon after the first of the month as convenient.

"2. That it shall be the first duty of the Secretary, after the annual meeting, to report the list of officers elected by the Society to the Secretary of the State Society.

"3. That the annual dues be made payable January 1, and delinquent July 1 of each year.

"4. That all members delinquent in dues on July 1 shall, without action of the Society, be held suspended and not in good standing.

"5. That it shall be the duty of the Secretary to make his annual report to the Secretary of the State Society not later than September 1 of each year. (See Chapter XII, Section 8, Revised By-Laws.)

"6. That delegates to the State Society shall be elected for a term of two years, and any Society entitled to more than one delegate elect one-half, as near as may be, each year. (Chapter V, Section 2, Revised By-Laws.)

"7. That 'Every reputable and legally qualified physician residing within its jurisdiction, who does not practice or claim to practice and agrees not to practice sectarian medicine,' shall be entitled to membership. (Chapter XII, Section 5, Revised By-Laws.)

"8. That a member of a constituent society of this State be accepted by another constituent society upon presentation of a

proper transfer card, without delay or duplication of dues."

Your Committee is pleased to report that these suggestions were cordially received and promptly adopted in toto by all the larger, active County and District Societies, to wit: Boulder, Delta, Denver, El Paso, Fremont, Las Animas, Lake, Larimer, Montrose, Otero, Pueblo, San Juan, La Plata, San Miguel, San Luis Valley, Teller and Weld. Mesa County accepted all except No. 6, the majority of its members preferring to elect delegates to this House for a term of one year instead of two.

It would appear that there remain only four societies, and these small, with infrequent meetings, which have not yet taken action. Ouray has taken no action. Garfield and North East have answered so vaguely as to leave the impression that they have not yet adopted the Committee's recommendations, and the Eastern Colorado Society was formed last Spring and has been too recently advised of the revision of our By-Laws and of the rules suggested to adopt them.

It would thus appear that the efforts of your Committee to carry out your instructions have been eminently successful, and that the laws governing constituent societies are now so thoroughly in accord with those of the State Society that it only remains for the officers of the various societies to be active in their duties under their Constitution and By-Laws to make our composite society a popular and valuable organization as a whole, and to each and every member.

In view of the fact that so little of this work remains to be done, your Committee begs to suggest that it be discharged, and that the Secretary of this Society be instructed to urge the four societies named, to wit: Ouray, Garfield, North East, and Eastern Colorado, to adopt the recommendations of this Committee as con-

tained in its circular letter to be found published in full in COLORADO MEDICINE of November, 1904.

Respectfully submitted,

W. A. JAYNE,

Chairman.

EDWARD JACKSON,

J. M. BLAINE,

Committee.

Colorado Springs, October 2, 1905.

Moved by Dr. Chase that the report be adopted as read.

Carried.

Dr. Jackson, Chairman of the Special Committee to look into the Charter of the Colorado State Medical Society, made the following report:

REPORT OF THE COMMITTEE ON CHARTER.

Your Committee appointed at the last annual meeting to look into the matter of the charter of the Colorado State Medical Society respectfully reports:

There is on file in the office of the Secretary of State of Colorado the following document which was certified November 1st, 1888:

We, the undersigned, severally members of the Board of Trustees of the Colorado Territorial Medical Society, a corporation organized and existing under the laws of the Territory of Colorado, desiring to become a body corporate under the laws of the State of Colorado, do hereby certify in duplicate as follows, viz.:

1. That the corporate name of the said association shall be "The Colorado State Medical Society."

2. That the objects of said Society shall be to promote the usefulness, honor, and interest of the Medical Profession; to enlighten and direct public opinion in regard to the duties, responsibilities and requirements of medical men; to excite and encourage emulation and concert of action in the profession of medicine, and to facilitate and foster friendly intercourse between those who are connected with

the said profession and to promote the diffusion of useful information pertinent thereto.

3. The Trustees of said Society shall be seven in number, and Dr. H. A. Lemen, Dr. Jacob Reed, Jr., Dr. J. C. Davis, Dr. A. Stedman, Dr. W. R. Whitehead, Dr. L. E. Lemen and Dr. W. E. Wilson are hereby designated as the Trustees, who shall manage the business and concerns of the said association for the first year of its existence.

4. The term of the corporate existence of the said association shall be perpetual.

5. The business and concerns of said Society shall be carried on in all the Counties of said State, and its chief office shall be in the City of Denver, in the County of Arapahoe in the State aforesaid, unless legally changed to some other place.

6. The Trustees of said Society shall have the power to make such prudential by-laws, not inconsistent with law, as they may deem proper from time to time, for the management and disposition of the business and concerns of the said association.

In witness thereof, we have set hereunto our hands and seals on the 31st day of October, A. D. 1888.

A. STEDMAN,	(Seal)
J. CULVER DAVIS,	(Seal)
W. R. WHITEHEAD,	(Seal)
JACOB REED, JR.,	(Seal)
H. A. LEMEN,	(Seal)
W. E. WILSON,	(Seal)
L. E. LEMEN.	(Seal)

State of Colorado, }
County of Arapahoe, } ss.

Attention is called to the fact that the contents of our charter appear to have been overlooked in framing the present Constitution and By-Laws of the Society. The name and objects of the Society being stated in the charter, articles in the Constitution referring thereto, while in gen-

eral harmony with the charter, appear to be superfluous. It will also be noted that the charter provides for seven Trustees who are charged with the duty of making the By-Laws. While it must be assumed that the Trustees last chosen still hold office under the charter, it would seem essential in order that the Society shall continue to act under its original charter, that their successors should be chosen at this meeting; that the By-Laws already approved by the Society should be ratified by the Trustees, and that provision should be made in the By-Laws for the election of Trustees and the specific duties they should perform.

From the proceedings of the Society it appears that the Trustees last chosen in accordance with the charter are: A. Stedman, W. E. Wilson, E. J. A. Rogers, and J. N. Hall of Denver, H. Work of Pueblo, and S. E. Solly of Colorado Springs. The late Dr. J. T. Eskridge was, also, one of the Trustees.

Respectfully submitted,

EDWARD JACKSON,
CRUM EPLER.

Moved by Dr. Jayne that a special committee of 5 be appointed by the President to consider the subject of this report, and also the subject of any desirable amendments to the charter, and to report not later than Wednesday morning.

Carried.

The President appointed as such special committee Dr. Jackson, Dr. Epler, Dr. Melville Black, Dr. Hall and Dr. Work.

UNFINISHED BUSINESS.

Dr. Jayne, member of the committee to revise the Constitution, made a preliminary report, but as there was some doubt as to whether the recommendations of said committee would conflict with the charter now in force, it was moved by Dr. Epler, duly seconded and carried, that the report of this committee be deferred until

after the report of the Special Committee on the Charter was made.

NEW BUSINESS.

Moved by Dr. Jayne, seconded and carried, that a committee of two be appointed by the President to draft a suitable resolution expressing to Dr. S. D. Van Meter the thanks and appreciation of the Colorado State Medical Society for his unselfish and able work in securing the passage of our present medical bill.

The President appointed as such committee Drs. Hall and Melville Black.

Moved by Dr. Jayne that the President appoint a nominating Committee of 5, to nominate officers for the ensuing year.

Seconded by Dr. Epler.

This motion called forth prolonged discussion, after which Dr. Jayne obtained consent to withdraw his motion and presented the following instead: "I move that the House request the President to present a nominating committee of 5 for the consideration of this House."

On a viva voce vote the President declared he was unable to say which side prevailed and called for a rising vote. A rising vote showed 8 for and 10 opposed to said motion, which was declared lost.

Dr. Espey moved that one name from each constituent society present be placed in the hat, and that the first five drawn out constitute the committee, and to allow Denver one delegate in any event.

Motion seconded.

Motion lost.

On motion, duly seconded, a recess of five minutes was taken in order to allow the members of the different constituent societies to caucus.

After recess there were presented the following names as candidates for members of the committee:

Denver, Dr. Jackson.

El Paso County, Dr. Gildea.

Pueblo County, Dr. Epler.

Boulder County, Dr. Queall.

Fremont County, Dr. Little.

Montrose County, Dr. Johnson.

Weld County, Dr. Call.

On motion by Dr. Jayne, duly seconded and carried, it was resolved that the House proceed to ballot for members of the committee, the five receiving the highest number of votes to be the members of committee.

The President appointed Dr. Simon and Dr. Little as tellers to receive and count the ballots.

After the ballots were counted Dr. Simon reported the following as the result.

Dr. Jackson, 17 votes.

Dr. Queall, 11 votes.

Dr. Gildea, 11 votes.

Dr. Little, 17 votes.

Dr. Johnson, 8 votes.

Dr. Espey, 8 votes.

Dr. Epler, 9 votes.

Dr. Call, 9 votes.

Drs. Jackson, Queall, Gildea and Little were declared duly elected, and another ballot was ordered for the fifth member of the committee.

The tellers announced the following as the result of the ballot:

Dr. Call, 9 votes.

Dr. Epler, 7 votes.

Dr. Espey, 3 votes.

Dr. Johnson, 1 vote.

The President announced that Dr. Call, having received the highest number of votes, was elected the fifth member of the committee.

Dr. Blaine read the following communication:

"I hereby place in your hands my resignation as a member of the Publication Committee of the State Medical Society, with the request that you place it before the House of Delegates, that they may act upon it and fill the vacancy at this meeting of the Association.

Very respectfully,

CAROL E. EDSON."

Dr. Jayne: I move it be accepted.
Seconded and carried.

Dr. Call presented the following resolutions passed by the Weld County Society:

"Weld County Medical Society in regular session assembled: Resolved, that

"WHEREAS, Colorado is the only important state not specifically demanding an examination for a state license to practice medicine; and

"WHEREAS, There at present exists an acute if not chronic congestion of the physician body; and

"WHEREAS, The law regulating the practice of medicine in Colorado grants the regularly appointed Board of Examiners the right to examine all applicants for a state license:

"Therefore, This Society does earnestly petition and request that the Board of Examiners shall exercise their full power and prerogative of requiring a written examination of each and every candidate for a state license who shall apply therefor. By so doing the Society believes that the entire medical profession will be benefited."

Dr. Call moved the adoption of the resolutions. Seconded.

Dr. Jayne moved to amend the motion by referring the matter to a special committee of three, with instructions to the committee to confer with the State Board of Medical Examiners.

Amendment seconded.

Dr. Call: I will withdraw my motion and accept that of Dr. Jayne in its stead.

Dr. Jayne's amendment carried.

The President appointed as such committee Drs. Hall, Little and Call.

On motion of Dr. Simon, duly seconded, the House of Delegates adjourned to meet to-morrow morning at 9 o'clock.

Colorado Springs, Colo., Tuesday, October 3, 9 o'clock a. m.

On roll-call the following responded:

Drs. Cattermole, Chase, Black, Hall, Jayne, Stevens, Simon, Kahn, Johnson.

There being a quorum present the House proceeded with the transaction of business.

Dr. Black: The committee appointed to draft a suitable resolution to Dr. Van Meter has this to present:

The House of Delegates of the Colorado State Medical Society, in convention assembled, desires to express its appreciation of the self-sacrificing services rendered to the state by Dr. S. D. Van Meter in securing the passage of the present law regulating the practice of medicine in Colorado.

MELVILLE BLACK,
J. N. HALL,

Committee.

Dr. Jayne: I move it be accepted and the communication sent over the signature of the President and Secretary to Dr. Van Meter. Seconded.

Dr. Simon: I move to amend Dr. Jayne's motion, by inserting the words: That it shall be first engrossed, and that the amount necessary for such engrossment be appropriated by the Society.

Amendment seconded and carried.

Motion as amended carried.

Dr. Jackson, of the Nominating Committee, reported progress, and requested until to-morrow to make its report.

The President: If there is no objection, the report will be accepted and the committee given further time, and will report to-morrow morning. There being no objection, it is so ordered.

Dr. Black: I would like to offer an amendment to Section 1, Chapter VIII, of the By-Laws, which it will be necessary to lay over until to-morrow under the by-laws. I desire to amend that section by substituting the word "first" for the word "third" in the sixth line thereof, so that the section, as amended, will read as follows:

SECTION 1. The President shall preside over the general meetings and House

of Delegates, and shall perform such duties as custom and parliamentary usage require. He shall deliver an address at the general meeting on the afternoon of the first day of the annual meeting upon such matters as he may deem of importance to the Society and profession; he shall assist the Councillors in building up the constituent societies and may at any time make suggestions in writing to the general meeting, the House of Delegates or to standing or special committees.

The way the section now stands requires that this address shall be given on the third afternoon; the President retires within a few moments after this address, and any recommendations that he sees fit to make for the benefit of medicine in general in this state have to lie over until the next meeting of the Association one year later before they can be acted upon, and by that time they are oftentimes forgotten. It would seem, therefore, advisable that the President should read his address earlier in the session so that his recommendations can be acted upon during his term of office or during the particular session in which they were made. This statement is signed by Dr. Queall and myself.

The President: Under the provisions of the By-Laws relating to amendments thereof, the proposed amendment of Drs. Black and Queall will be laid upon the table until to-morrow.

On motion of Dr. Black, duly seconded, an adjournment was taken until to-morrow morning at 9 o'clock.

Wednesday, October 4, 1905, 9 o'clock a. m.

House of Delegates called to order by the President.

Roll-call showed the following members present: Drs. Queall, Cattermole, Hall, Melville Black, Burns, Jackson, Jayne, Stevens, Simon, Phelan, Swan,

Little, Kahn, Espey, Smith, Johnson, Stubbs, Black, Epler, Call and Cohen.

There being a quorum, the meeting was declared ready to proceed with the transaction of business.

The first order of business was the report of the Committee on Publication, which was presented by Dr. Jayne, the chairman, as follows:

Colorado Springs, Colo., October 4, 1905.

To the House of Delegates:

LADIES AND GENTLEMEN—Your Committee appointed to consider the report of the Publication Committee, after a careful consideration of all matters submitted to it unanimously recommend that this Society continue to own and publish COLORADO MEDICINE.

Your committee, however, recommends that the character of the journal be changed, and the scope enlarged by increasing the income from judiciously, properly selected advertisements, which it is estimated would add at least \$500 to the amount available. A renewed and diligent effort must be made to place our journal upon a stronger footing and improve its scientific value.

Your committee are of the opinion that it is of the utmost importance to the welfare of the Society to own and publish an official organ. Its especial value is in awakening an interest in our constituent societies, fostering their interests by bringing them in touch with each other by publishing their proceedings, and the welding together of the integral parts of the Society into an association in which all parts of the state will take an active and healthful interest.

This Society has now had three years' experience under the re-organization, and during the two years last past we have had the benefit of the journal. We see at this meeting most encouraging evidences of a renewed and active interest

in the affairs of the Society, a large part of which must be attributed to the influence of COLORADO MEDICINE.

Your committee is of the opinion that any arrangement to hand over the papers to another journal would be unwise. It would be still more unwise to consolidate COLORADO MEDICINE with another journal whose ownership is not vested in this Society. The ethical standards of your Publishing Committee, if they expressed the prevailing views of the Society, would inevitably clash sooner or later with the business interests, especially as expressed in the advertising pages of the journal, and lead either to the introduction of objectionable matter or to a rupture, in which case the Society would be left without an organ and would be under the necessity of starting anew. No guarantee can be offered against such an occurrence, and although a five-year contract, which is proffered, be made, the provision which is insisted upon for a mutual release at any annual meeting, would make it equivalent to a contract for one year only.

It is quite true that such a contract as offered might prove more economical for the Society, and give a bound volume of Transactions at a small price. The Society can, however, afford to appropriate a sufficient sum from its treasury to support the journal, and your committee cannot conceive of a better use for the money. COLORADO MEDICINE may be bound at a cost but very slightly in excess of the fifty cents to be charged for the Transactions at the lowest offer.

Your committee, therefore, earnestly recommends that COLORADO MEDICINE be continued under the Society's ownership and management, with strictly ethical advertising, along the line of the Council of Pharmacy and Chemistry of the American Medical Association, and the adoption of business methods, thus falling into accord with the policy of other

State Medical Societies and their journals.

Your committee urge that each and every member of this Society should rally to the support of our struggling offspring and nurture it until it shall become lusty and strong, a journal which should not only be of inestimable value, but a subject of pride and satisfaction.

Respectfully,

W. A. JAYNE.

W. H. SWAN.

W. T. LITTLE.

Dr. Epler moved the adoption of the report. Seconded and carried.

Dr. Jayne offered the following resolution:

"Resolved, That the House of Delegates name the subscription price of COLORADO MEDICINE as \$2 per year for all subscribers, whether members of the State Medical Society or not."

Seconded and carried.

Dr. Jackson presented the report of the committee, to whom was referred the report of the Committee on Charter.

Colorado State Medical Society, House of Delegates:

The committee to whom was referred the report of the Committee on Charter suggest the following amendments to the Constitution and By-Laws to bring their provisions in full harmony with those of the Charter.

CONSTITUTION.

Strike out Article II as superfluous, Article II to be entitled Article I, General Purposes.

Strike out the first sentence and begin the second "To attain the object set forth in its charter, this Society shall endeavor." etc., as now written.

Insert as follows:

ARTICLE II.—TRUSTEES.

The Trustees of this Society shall be chosen by the House of Delegates in the manner prescribed for the election of

officers. They shall consist of the President, the two ex-Presidents who have last preceded him in office, and four members, two to be chosen each year for a term of two years. All vacancies in the Trustees shall be filled for the unexpired term. But no member shall be chosen Trustee who has not served two years in the House of Delegates.

Article XII. Add "and provided that such amendment shall receive the written approval of a majority of the Trustees."

By-Laws, Article XV. Add "and provided that such amendment shall receive the written approval of the majority of the Trustees."

MELVILLE BLACK.

CRUM EPLER.

EDWARD JACKSON.

J. N. HALL.

Moved by Dr. Jayne that this report be referred to the committee which has been in existence the past two years on Revision of the Constitution and By-Laws, and that the decision of the committee be considered as the action of this House. Seconded and carried.

Dr. Little offered the following amendments to the By-Laws:

To amend Section 3, Chapter VI, by striking out the word "third" in the second line and inserting therefor the word "second," so that the section as amended would read:

"Section 3. No new business shall be introduced after the second day of the annual meeting except by unanimous consent, and such new business shall require a unanimous vote for final action."

Also to amend Section 1, of Chapter VII, by striking out the word "day" in the first line and inserting therefor the word "meeting;" also striking out the word "meeting" in the second line and inserting therefor the word "session," so that said section as amended would read as follows:

"Section 1. On the first meeting of each annual session the House of Delegates shall select a Committee on Nominations consisting of five delegates, no two of whom shall be from the same constituent society. This committee shall prepare a ticket nominating two members of the Society for the office of president and at least one for each of the other offices to be filled, delegates to the American Medical Association, member of the Publication Committee, and a time and place of meeting for the following year, and report the same to the House not later than the second day of each annual meeting. Additional nominations may be made by delegates from the floor."

Under the section of the by-law relating to amendments thereto, the amendments proposed by Dr. Little were laid on the table until to-morrow.

Dr. Epler: I make a motion to the effect that this committee on revision be given authority, after making such investigation as they see fit, legal or otherwise, to insert in the constitution which is now under consideration their recommendations before sending it to the constituent societies for ratification, and that this shall be considered the action of the **House.**

Seconded and carried.

Dr. Jayne asked permission to rise to a question of personal privilege, and stated that he wished to withdraw his name as a candidate for delegate to the A. M. A. in favor of some candidate not from the County of Denver.

The Committee on Nominations submitted the following report:

For President—H. G. Wetherill, E. R. Neper.

For First Vice President—C. F. Gardiner.

For Second Vice President—J. M. Braden.

For Third Vice President—C. A. Ringle.

For Secretary—E. W. Stevens.

For Treasurer—W. J. Rothwell, or, if Dr. Rothwell is ineligible, F. P. Gengenbach.

Delegate to A. M. A.—H. Work.

Alternate Delegate to A. M. A.—G. H. Cattermole.

Councillors—Dr. Frank Finney, Dr. E. T. Boyd.

Publication Committee—Dr. E. Jackson, to fill vacancy caused by resignation of Dr. Edson, Dr. J. R. Arneill.

Place of Meeting—Denver, first Monday in October, at 8 p. m.

Trustees—A. Stedman, W. E. Wilson, E. J. A. Rogers, J. N. Hall, H. Work, S. E. Solly and R. W. Corwin.

The following nominations were made from the floor:

Dr. Kahn nominated Dr. E. T. Boyd, of Leadville, for the office of First Vice President.

Dr. Johnson nominated Dr. Melville Black for Secretary.

Dr. Burns nominated Dr. J. M. Blaine as member of the Publication Committee to fill the vacancy caused by resignation of Dr. Edson.

Dr. Espey nominated Dr. Jaffa, of Trinidad, for Second Vice President.

Dr. Kahn nominated Dr. Bull, of Grand Junction, as alternate delegate to A. M. A.

Dr. S. E. Solly was nominated for Treasurer.

Moved by Dr. Jackson, seconded and carried, that nominations close.

On motion an adjournment was taken until 5 p. m. to-day.

At 5 o'clock p. m. the House of Delegates met pursuant to adjournment, and a roll call showed a quorum present.

The only business to come before the House at this meeting was the appointment of a Committee on Appropriations,

and the President appointed as such committee Dr. Sol Kahn of Leadville, Dr. I. B. Perkins of Denver and Dr. Cattermole of Boulder.

On motion the House adjourned to meet at 8:30 to-morrow morning.

October 5, 1905, 9 a. m.

Roll call showed following members present:

Drs. Queall, Cattermole, J. N. Hall, T. M. Burns, Melville Black, Jackson, Jayne, Swan, Little, Kahn, Espey, Stubbs, Slick, H. A. Black, Epler, Sheldon, Call, Johnson, Smith and Cohen.

Also, J. C. Chipman, by Sol Kahn, proxy; E. Stuver, by Sol Kahn, proxy; Dr. Solly, by Dr. Cohen, proxy; S. Simon, by Dr. I. B. Perkins, proxy.

Moved by Dr. Black that the reading of the minutes be dispensed with. Carried.

ELECTION OF OFFICERS.

Dr. Neepier withdrew as a candidate for President.

Moved by Dr. Melville Black, that inasmuch as there was but one candidate for President that the Secretary be instructed to cast the ballot of the House of Delegates for Dr. H. G. Wetherill for President for the ensuing year. Carried.

The Secretary announced that he cast 20 ballots for Dr. H. G. Wetherill, and Dr. Wetherill was declared the duly elected President.

The members were directed to prepare their ballots for First Vice President.

Dr. Jayne raised the point of order that this being a legislative body a member of the House could not delegate his power to a proxy, and only the members present in person be allowed to vote.

The chair sustained the point of order.

The President appointed Drs. H. A. Black and Dr. Epler as tellers to collect and count the ballots.

The tellers reported the result of the

ballot for First Vice President as follows:

Dr. E. T. Boyd of Leadville, 11; Dr. E. F. Gardiner, 6; Dr. Bull, 1; Dr. H. M. Cohen, 2.

Dr. Boyd having received a majority of the votes cast was declared to be duly elected as First Vice President.

A vote was then taken upon the names of Dr. Perry Jaffa and Dr. J. M. Braden for the office of Second Vice President, and the tellers announced the result of the ballot as follows: Dr. Jaffa, 14; Dr. Braden, 5.

Dr. Jaffa was declared duly elected as Second Vice President.

Dr. Jackson: There being but one candidate for the office of Third Vice President, I move you that the Secretary cast the ballot of the House for Dr. C. A. Ringle for Third Vice President.

Seconded and carried.

The Secretary announced that he cast 19 ballots for Dr. Ringle for Third Vice President, and he was declared duly elected.

A ballot was then taken upon the names of Drs. E. W. Stevens and Melville Black for the office of Secretary. The tellers reported the result of the ballot as follows: Dr. Black, 19; Dr. Stevens, 1. Dr. Black was declared duly elected.

Dr. Melville Black presented to the House the written resignation of Dr. S. E. Solly as a member of the Committee on Publication.

Moved by Dr. Espey, seconded and carried, that the resignation be accepted.

Dr. Jayne withdrew the name of Dr. E. P. Gengenbach as a candidate for the office of Treasurer.

Moved by Dr. Kahn that the Secretary be instructed to cast the vote of the House for Dr. S. E. Solly for Treasurer. Seconded and carried.

The Secretary announced that he cast 20 votes for Dr. S. E. Solly, and Dr. Solly was declared elected Treasurer.

Dr. H. A. Black moved that the Secretary be instructed to cast the vote of the House for Dr. Hubert Work, of Pueblo, for delegate to A. M. A. Seconded and carried.

The Secretary announced that he cast 20 votes for Dr. Work, and he was declared duly elected as delegate to A. M. A.

A ballot was then taken upon the names of Dr. G. H. Cattermole, of Boulder, and Dr. H. R. Bull, of Grand Junction, for alternate delegate to A. M. A.

Tellers reported the result of the ballot as follows: Dr. Cattermole, 5; Dr. Bull, 15. Dr. Bull was declared duly elected.

Dr. Cattermole moved to make the election of Dr. Bull unanimous. Seconded and carried.

Dr. Jackson moved that the Secretary be instructed to cast the vote of the House for Drs. Frank Finney and E. T. Boyd for Councillors for the ensuing term.

The Secretary announced that he cast 20 votes for Drs. Finney and Boyd for Councillors, and they were declared duly elected.

Dr. Melville Black nominated Dr. J. N. Hall, of Denver, as a member of the Publication Committee to fill the vacancy caused by the resignation of Dr. S. E. Solly.

Dr. Epler moved that the Secretary be instructed to cast the ballot of the House for Dr. E. Jackson, of Denver, as member of the Publication Committee for the full term, Dr. J. M. Blaine, of Denver, and Dr. J. N. Hall, of Denver, as members of said committee to fill the vacancy caused by the resignation of Dr. Edson and Dr. Solly respectively. Seconded and carried.

The Secretary announced that he cast 20 votes for the gentlemen named for the respective terms.

The President then announced as the next order of business the election of

Trustees, and Dr. Jayne raised the point of order that under the present constitution Trustees are not a part of this constitutional body and the Society had no constitutional right to elect Trustees, and it was moved by Dr. Jayne, seconded and carried, that the House of Delegates defer any action in regard to election of Trustees until another meeting.

Dr. Jayne moved that Dr. H. A. Black's proposed amendment to Section 3, Chapter VI, be adopted. Seconded and carried.

Dr. Epler moved that Dr. H. A. Black's proposed amendment of Section 1, Chapter VII, be adopted. Seconded and carried.

Moved by Dr. Kahn that Dr. Melville Black's proposed amendment of Section 1, Chapter VIII, be adopted. Seconded and carried.

Dr. Jayne, Chairman of the Committee on Revision of the Constitution presented the following report:

REVISED CONSTITUTION OF THE COLORADO STATE MEDICAL SOCIETY.

Revised by the House of Delegates at the 1904 and 1905 Meetings, and to be Taken Up for Final Adoption at the Denver Meeting in 1906.

ARTICLE I.

Name of the Association.

The name and title of this organization shall be THE COLORADO STATE MEDICAL SOCIETY.

ARTICLE II.

Object.

The object of this society shall be to promote the science and art of medicine. To this end it shall endeavor to unite the medical profession of Colorado in one effective organization for the purpose of elevating the standard of medical education and increasing medical knowledge; of enlightening and directing public opinion in regard to the problems of state medicine; of securing the enactment and enforcement of just medical laws; of promoting the welfare and friendly relations of the physicians of this State, and of uniting with similar

societies of other states to form the American Medical Association.

ARTICLE III.

Constituent Societies.

Those County and District Medical Societies which are organized in accordance with the general plan of organization of this society and the American Medical Association, and are in affiliation with and hold charter from this society shall be constituent societies.

ARTICLE IV.

Membership.

The membership of this society shall consist of members in good standing of the constituent County and District Medical Societies of Colorado, and such honorary members as may be elected in accordance with the by-laws hereinafter provided.

ARTICLE V.

House of Delegates.

There shall be a legislative and business body known as the House of Delegates of the Colorado State Medical Society. It shall consist of delegates elected by the constituent societies as in the by-laws hereinafter provided, and the president, secretary and treasurer. It shall exercise the delegated powers of the members of the Colorado State Medical Society and be the representative body of the constituent societies. It shall hold annual sessions; elect the officers of the society, and transact all the general business of the society not otherwise provided for. It shall issue charters to the constituent societies and may revoke them for cause.

ARTICLE VI.

Scientific Work.

The general meetings and sections shall be devoted to the scientific work of the society. The power to create or discontinue sections shall be vested in the House of Delegates.

ARTICLE VII.

Meetings.

The society shall hold an annual meeting at a time and place fixed by the House of Delegates.

ARTICLE VIII.

Officers.

Section 1. The officers of this society shall be a president, four vice-presidents, a secretary, a treasurer, who shall constitute the

trustees as provided in the certificate of incorporation, and ten councillors.

Sec. 2. The president and vice-presidents shall be elected for a term of one year, the secretary and treasurer for three, and councillors shall be elected for terms of five years each, the councillors being divided into classes so that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The officers shall be elected on the morning of the last day of each annual meeting. No member of the House of Delegates shall be eligible to any office named in this article, except that of secretary and treasurer, and no member of the House shall hold any such office, except the president, secretary and treasurer. No person shall be elected to any such office who is not in actual attendance upon that annual meeting.

ARTICLE IX.

Funds.

Funds shall be raised by an equal per capita assessment upon the constituent societies, to be fixed by the House of Delegates, from the society's publications and in such other manner as approved by the House of Delegates. The funds of the society shall be expended under the direction of the House of Delegates, and may be appropriated to defray the necessary expenses of the society; to enable committees to fulfil their respective duties; to encourage scientific investigation; to carry on its publications, and for such other purposes for the benefit of the society or profession as may be approved by the House of Delegates.

ARTICLE X.

Referendum.

Either the general meeting of the society or the House of Delegates by a two-thirds vote may order a general referendum and submit any question to the membership of the society for a vote. If the persons voting shall comprise a majority of all the members, a majority of such vote shall determine and be binding upon the House of Delegates and the society.

ARTICLE XI.

The Seal.

The society shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XII.

Amendments.

The House of Delegates may amend any article of this constitution by a two-thirds vote of the delegates registered at that annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been sent officially to each constituent society at least two months before the session at which final action is to be taken.

MELVILLE BLACK,
Secretary.

W. A. JAYNE,
EDWARD JACKSON,
J. M. BLAINE,

Committee on Constitution and By-Laws.

The special committee to which was referred the resolutions presented by Dr. Call reported progress and asked for further time.

Moved by Dr. Kahn that the committee be given until the first meeting of the House of Delegates next year in which to report. Seconded and carried.

Dr. Kahn presented the following report of the Committee on Appropriations: *To the House of Delegates of the Colorado State Medical Society:*

Your Committee on Appropriations would recommend that the following appropriations be made for the ensuing year:

COLORADO MEDICINE.....	\$1,100.00
Editor COLORADO MEDICINE...	300.00
Secretary of the Society.....	150.00
Secretary's postage.....	50.00
Emergency fund	50.00
Programmes	20.00

Total.....\$1,670.00

(Signed) SOL G. KAHN,
G. H. CATTERMOLE,
I. B. PERKINS,

Committee.

Dr. Epler moved the adoption of the report. Seconded and carried.

Dr. Kahn offered the following resolution from the Committee on Appropriations:

Resolved, That it is the sense of this House that the practice of paying the transportation expenses of its delegate to the American Medical Association be discontinued.

(Signed) SOL G. KAHN,
I. B. PERKINS,
G. H. CATTERMOLLE,
Committee.

Dr. Jayne moved the adoption of the resolution.

Seconded and carried.

Dr. Epler moved that the Colorado State Medical Society request the alternate delegate to the A. M. A. to attend the meeting of that body. Seconded and carried.

On the suggestion of Dr. Melville Black, of Denver, the President appointed a committee of three to prepare and present to the afternoon session of the Society a resolution expressing the thanks of the State Society to the members of the El Paso County Society for the very enjoyable and pleasant time made possible by the efforts of the local society.

The President appointed as such committee Drs. Melville Black of Denver, Sol G. Kahn of Leadville, and Crum Epler of Pueblo.

Moved by Dr. Kahn, seconded and carried, that the House of Delegates adjourn until the evening prior to the first day of the annual session next year, at 9 o'clock p. m., unless the President should call a meeting in the interim.

MINUTES OF GENERAL SESSIONS.

Tuesday, October 3, 1905, 10 o'clock a. m.

Society called to order by President Finney.

Prayer by Rev. Dr. Work, pastor of the First Presbyterian Church of Colorado Springs.

Dr. Blaine read the following communication:

Sisters of Charity, Glockner Sanitorium, Colorado Springs, Colorado.

Colorado Springs, Colo., Oct. 2, 1905.

To the Members of the Medical Convention Assembled at Colorado Springs:

Gentlemen—In behalf of the Sisters of Charity in charge of the Glockner Sanitorium, I wish to join in the welcome accorded you by the residents of Colorado Springs and to express the hope that your sojourn amongst us may be a season of enjoyment.

I trust that it will be possible for all the members of your honorable profession to visit this institution, where we endeavor to co-operate to the best of our poor ability with the doctors of this city in alleviating the suffering of those who seek this genial climate with the hope of regaining their health.

I desire to extend to you all a very cordial invitation and a hearty welcome to our Home.

I am, gentlemen,

Very respectfully yours,
SISTER ROSE ALEXIUS.

Dr. Wetherill: I move the Secretary be instructed to make acknowledgment of this kind invitation to the sisters and extend the thanks of the Society. Seconded and carried.

(As the minutes of the Scientific Sessions merely mention the names of those who read and discussed papers it has been thought best to omit all but the closing minutes of the last session.—PUB. COM.)

Thursday, Oct. 5, 1905, 1:30 p. m.

Dr. Kahn presented the following motion:

Colorado Springs, Colo., Oct. 5, 1905.

In full appreciation of the expressions voiced in the President's Address, in reference to the prevention of tuberculosis.

and that the State of Colorado should lead in the treatment and care of the many thousands of cases in our land, we feel that so important a subject as this coming after due and mature deliberation from our President be not passed by simply the mention thereof, but that some action should be taken in accordance with the President's suggestion.

We therefore move that a committee of 15 be appointed by the outgoing President, and that he be a member of this committee, for the purpose of devising ways and means for carrying out the recommendations suggested for the prevention of tuberculosis in Colorado, and that they report at our next meeting.

(Signed) SOL G. KAHN,
CRUM EPLER.

Seconded by Dr. Epler and carried.

Dr. Black presented the following report of the Special Committee appointed by the House of Delegates:

On behalf of the Colorado State Medical Society we desire to convey to the El Paso County Medical Society, and their Committee of Arrangements, the appreciation we feel for the elaborate and complete manner in which we have been entertained, all of which has contributed to such an enjoyable time that we shall look forward with much pleasure to an early return meeting of the State Society in your city.

We recommend that the Secretary be instructed to send to the Secretary of the El Paso County Medical Society a copy of these resolutions, and that the same shall be spread upon our minutes.

MELVILLE BLACK,
CRUM EPLER,
SOL G. KAHN,
Committee.

Moved by Dr. Burns that the report be adopted. Seconded and carried.

The Secretary, Dr. Blaine, made the

following report of the proceedings of the House of Delegates:

(Report omitted as it was merely a summary of the proceedings of the House of Delegates.—Ed.)

Dr. Blaine moved that all papers whose authors were present but were unable to read their papers on account of lack of time be read by title and ordered printed in COLORADO MEDICINE.

Second and carried.

Dr. Blaine: I received a paper the other day with a letter from Dr. Robe, of Pueblo, stating that he was suddenly called east. I move that that also be included. Seconded and carried.

Dr. Blaine stated that during his term of office as Secretary a great many papers, periodicals and literature of various kinds had accumulated in his office, and moved that he be permitted to turn all such accumulated literature over to the Denver Academy of Medicine.

Seconded and carried.

Dr. Hall moved a vote of thanks be extended to the Antlers Hotel management, to the officers of the Society, and to the President of Colorado College for the many courtesies extended, and that the Secretary be instructed to convey the thanks of the Society by letter to President Slocum of Colorado College. Seconded and carried.

The President appointed Dr. Neepor a committee of one to escort the newly elected President, Dr. H. G. Wetherill, of Denver, to the chair.

Thereupon Dr. Wetherill made the following remarks:

(Remarks published in October number.—Ed.)

Drs. S. D. Hopkins, J. N. Hall and Melville Black presented to Mrs. Wetherill a bouquet of American Beauty roses.

Dr. Miel moved that three cheers be given for Dr. Finney, the President, Dr.

Blaine, the Secretary, and Colorado Springs.

Carried and the cheers given with hearty good will.

Society adjourned sine die.

ORIGINAL PAPERS

THE SUB-MUCOUS WINDOW RESECTION OF THE NASAL SEPTUM.

By WILLIAM C. BANE, M. D., Denver.

Numerous articles descriptive of the sub-mucous operation for the correction of deflected septa have appeared in print during the past few years, and especially the last two years. Kreig reported his first window resections in 1886, nineteen years ago. Professor Killian of Freiburg, Germany, has been an enthusiastic advocate of the sub-mucous operation for several years. His first report was given out in September, 1899. The last article by Professor Killian, published in 1904, has been translated, and appeared in the *Annals of Otology, Rhinology and Laryngology* for June of this year. It is a most excellent report of the modern operation as done by Professor Killian. Several American rhinologists have favored us with reports of their work and their methods of doing the sub-mucous operation. Foremost among these has been Dr. Otto T. Freer of Chicago. Dr. Freer is deserving of great credit for the excellent work he has done during the past four years. He has been most painstaking in working out in detail the technic of operating on the various forms of deflection of the cartilaginous and bony portions of the septum. Dr. Freer has devised numerous instruments for septal operations that are valuable. Doctors L. E. White, W. L. Ballenger and John M. Foster have manifested their inventive genius by devising or improving on instruments already in use. Dr. Ballenger

has made a very valuable improvement on the Killian septum knife, by having the blade made movable on a swivel joint.

In my first sub-mucous operation on a living subject, I was assisted by Dr. Foster. I used an angular dressing forceps as a speculum for keeping the mucous membranes away from the septum, while I cut away the cartilage with a Milbury conchotome. Dr. Foster remarked that he believed he could improve on the forceps; and that he has done in the widening of the blades. The speculum as devised by Dr. Foster, is made of spring brass by Jones, the instrument maker of Denver, and is all that could be desired for keeping the two mucous layers away from the septum while operating, and also to protect the membranes when packing with gauze. The instrument as made for Dr. Foster is much lighter than the speculum or rhinoscopy of Killian.

In operating on the septum with the Milbury conchotome, we found difficulty in cutting away sections of the bone. Dr. Foster had a heavier instrument made by Jones, that bites out the bony septum with ease, and in large pieces. With some improvements that Dr. Foster is having made in the bone punch, it will be an ideal instrument for the work.

The deflections vary greatly in shape and extent. According to Freer, about 36 per cent. of his cases were purely cartilaginous, and 57 per cent. were composed of bone and cartilage. About 8 per cent. were entirely bone.*

Professor Killian groups deflections as due to faulty growth and traumatism. Deflections obstruct nasal breathing, and unquestionably, when marked, have a deleterious effect on the general health by causing more or less mouth breathing.

The older forms of operation as done by Roberts, Asch, Roe, Gleason and Kyle, accomplished the object in many cases; yet they were more bloody, and the

**Annals Otol., Rhinol. and Laryn.*, vol. 14, p. 214.

after-treatment more prolonged, than by the sub-mucous operation.

The sub-mucous operation is adapted to all ages and all forms of deflection, whether confined to the cartilage, the bone, or the two combined. The patient is prepared as for any intra-nasal operation. The face is cleansed and the nasal chambers sprayed with some antiseptic solution. The vibrissae, as suggested by Freer, should be clipped, thus allowing of more thorough cleansing and better view of the field. The operation may be done with the patient in the sitting posture or lying down. I prefer to prepare the nose for operation with patient sitting up, then have him lie down on the operating chair with the head close to a Welsbach light that can be reflected into the nose. The mucous membrane on each side of the septum is anesthetized by the local application of cocaine in 4 to 12 per cent. solution, on films of cotton, or by the direct application of the powdered cocaine to the septum as recommended by Freer. I have used cocaine in both ways, and believe the powder gives the most satisfactory results. Adrenalin is also applied until the ischemic effect is obtained. The face is covered with sterile gauze, with an opening which exposes the nose and upper lip. Before making the incision, I pack a pledget of cotton back of the deflection to prevent blood or solutions from passing into the pharynx.

The instruments need not be numerous. A DeVilbiss speculum; a narrow scalpel or Freer knife; a semi-sharp and a blunt elevator for elevating the membranes from the septum; a special speculum for keeping the two mucous surfaces away from the septum; a cartilage knife, that of Ballenger's design being the best on the market; a conchotome, or bone cutting forceps; a gouge or chisel and a mallet for removal of the septal ridges; and a narrow bone curette for smoothing up edges. I have generally made use of what is known to the dentists as a wax

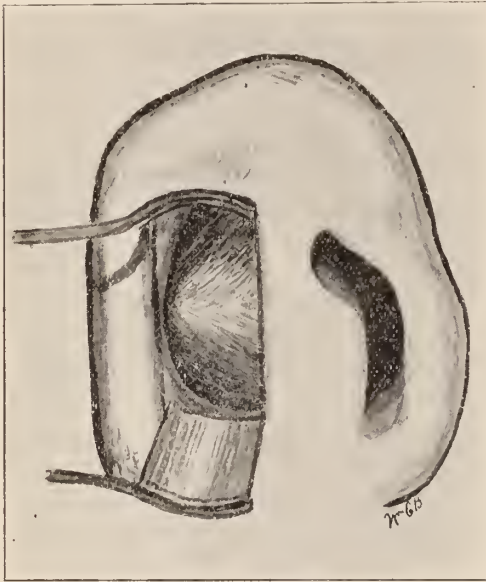
spatula for elevating the perichondrium. The ends of the spatula are semi-sharp, and curved just enough to turn over a convex surface and to hug close to the cartilage or bone. I have one end of the spatula made blunt so that the deep work can be done with less danger of making a perforation. The Hajek elevators are excellent instruments, but rather large for universal use. For sponges I have cotton wrapped on toothpicks in packages of fifty and then sterilized.

In almost every operation I have made the curved incision of Killian, which is in the mucous membrane and extends from one-fourth to three-eighths of an inch from the upper margin of the cartilage, downward to or below the spine of the vomer, varying according to the shape of the deflection. After detaching the membrane from the convex surface of the deflection, I make an incision through the cartilage along the line of the original incision with a Freer knife. The membrane on the concave side of the deflection is then elevated through the opening in the cartilage. The speculum, or rhinoscopia, as termed by Professor Killian, is then inserted, and thus the two perichondrial surfaces are separated from the septum. The cartilaginous portion is then cut out with the swivel knife, or as much of it as can be done in that way. Any remaining portions are removed with a punch, knife or bone curette. The bony deflection is cut away with a bone punch or by the use of a gouge. After apparent removal of all the deflecting portions, I examine the side where the deflection existed, by placing the membranes in contact, and note if any projections still remain that limit the passage back to the pharynx. If the passage is not clear, I re-enter between the two layers and continue to remove septum until the object aimed at has been accomplished.

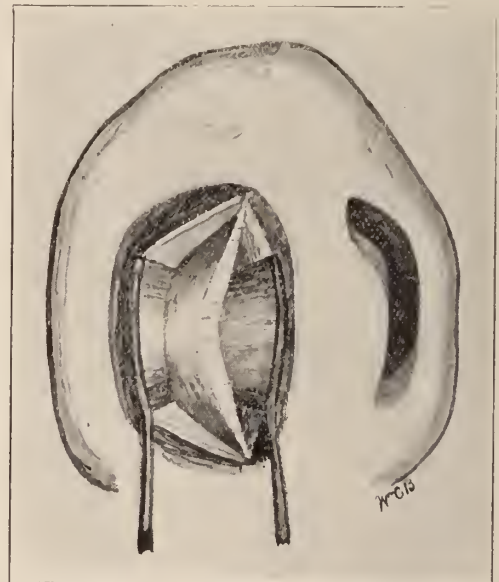
Dr. Freer justly lays great stress on the necessity of doing a *complete* opera-

tion. The operation as thus done is anything but simple. The next step is to close the wound with a stitch, though stitching is not essential if the margins are nicely co-aptated. I next use the speculum for keeping the passage open and the perichondrial surfaces in contact while the supporting gauze is placed.

brane covering the cartilage was found to be twice the normal thickness, and I found I was separating the mucous membrane from the perichondrium. Exposure of the cartilage soon revealed the error, and from that on the separation was easy. There was a great deal of the bone deflected, as shown by the pieces cut



Deflected Septum.



Deflecting Cartilage Exposed for Removal.

Up to the present time my operations have been limited to nine. The first case was operated last February. The patient, Charles A. H., aged 18, son of Dr. H., was brought to me three years ago on account of nasal obstruction. As he had not reached his growth I deferred doing an Asch operation. The cartilaginous septum was deflected to the right. Under cocaine anæsthesia I did the Killian operation. There was practically no pain during the operation, and no discomfort afterward. The cartilage was removed with the conchotome.

Case 2. T. G., aged 25, gave a history of imperfect nasal breathing. Examination revealed general deflection of the septum to the right side. Operated April 5th, 1905. In operating, the mem-

away—specimens exhibited. Only once did the patient complain of pain. There was no discomfort following the operation, and no reaction. Marked improvement in nasal breathing was the result. The septum was left straight.

Case 3. W. P. R., aged 22, son of Dr. W. J. R., was referred to me on account of defective hearing. Examination of the nose revealed a marked deflection of the cartilaginous and bony septum to the right, and a corresponding concavity in the left nostril. On April 12th, 1905, under cocaine anæsthesia, the deflecting portion of the septum was removed. One stitch was placed. Very slight discomfort to patient during the operation, and none afterward. The result was a straight septum and free breathing through both

nostrils. Packing was used but three days.

Case 4. Dr. W. P., aged 28. Was thrown from his horse March 5th, 1905, striking on face and fracturing the molar and superior maxilla and nose. At time of examination, June 12th, 1905, there was found an irregular deflection of the cartilaginous and bony septum to the right. Septum operation was done the same day under local anæsthesia. About an inch of the septum was removed, including considerable bone, as seen by the specimens I here exhibit. (Specimens shown.) The only complaint of pain was during the removal of some deeper portions of the bone. No reaction followed the operation. The result was all that could be desired; septum straight and both nasal passages free. I may add that a small spur was removed from the left side of septum, well back, four days after the sub-mucous operation.

Case 5. J. D. B., aged 15, was operated September 1st, 1905, for a spur and deflection of the septum to the left. The deflecting portion of the septum and spur were removed through the curved incision; operation done under cocaine anæsthesia. Some pain complained of during the latter part of the operation. Marked improvement in the nasal breathing was the result. The swivel knife was used in removing the cartilage.

Case 6. A. P., aged 18. Has always been a mouth breather; free from adenoids. Removed right tonsil six years ago. Examination of nose September 8th, 1905, revealed marked deflection of the bony septum to the right, the cartilage being quite straight. Under cocaine anæsthesia I entered the cartilage well back and removed deflecting portion of septum, which extended almost to the posterior edge of the vomer. The patient was operated in the sitting posture. Very little pain during the operation, and no discomfort afterwards. One stitch was

inserted. Packing and stitch removed second day. Septum straight; nasal breathing quite free.

Case 7. D. P. T., aged 24. Had not been able to breathe through the nose with comfort for several years. Posterior ends of the inferior turbinals were found enlarged and the septum deflected to the right, almost closing the passage well back. On September 21st, 1905, under cocaine anæsthesia I removed the deflection. The cartilage was cut out with the swivel knife, and the bone with a conchotome. An unusual amount of bleeding occurred from the lower angle of the curved incision, though adrenalin was freely applied. Stitch and packing removed the second day. In a letter from Salt Lake City, four days after the operation, the patient wrote: "My nose feels very comfortable now, and I am able to breathe without any difficulty."

Case 8. Mrs. D. A. M., aged 36. Consulted me on account of her eyes. Examination of the nose revealed a marked deviation of the cartilaginous septum to the left side, and a corresponding concavity in the right side. She was able to get very little air through the left nostril, and during cold weather suffered from the air striking the membrane covering the deflection. Under local anæsthesia September 22nd, 1905, I removed the deflecting portion with the swivel knife; inserted one stitch and packed with gauze. Gauze omitted and stitch removed the second day. Patient complained of discomfort for three or four days, yet there was no inflammatory reaction, and the left nasal passage was free.

Case 9. Mrs. M. C., aged 31. History of not being able to breathe through the left nostril. Examination revealed a marked deflection to the left, involving both cartilage and bone. Under local anæsthesia and adrenalin the deflecting portion was removed. Most of the cartilage was removed with the swivel knife.

A portion at the base was too much at right angles with the balance of the cartilage to be enclosed in the prongs of the swivel knife; this portion was cut away with a Freer knife and curette. Patient manifested constitutional effects of the cocaine, yet it passed off without any trouble. The result was free nasal breathing through the left nostril.

Of cases operated, in two the deflections were limited to the cartilage, one to bone, and the others included both cartilage and bone. In six of the nine cases, practically no discomfort was experienced during or following the operation. None were put to bed. In none of the cases was there a perforation. The question of reproduction of the septum has been answered in the affirmative by Dr. Freer and others. Hence excellent and permanent results can be promised our patients.

[The paper was followed by a demonstration of the operation on cartilages from sheep noses, after Ballenger.]

Discussion.

Dr. Foster, Denver: I have found from personal experience that this operation is vastly superior to the older forms for correction of deflected septa; and with these new instruments, the credit of which is due, as Dr. Bane says, to Killian and then to Ballenger, the operation is shortened tremendously. The first operation I did of this sort was in January last. It required an hour to complete it, as the instruments used were inadequate to do a quick and skillful operation. Much more time was required than was necessary in separating the perichondrium from the cartilage; and after this was done, the best instrument at hand for removing the septal cartilage was Millbury's conchotome. This instrument only bites a very small oval bit out at one time, and did not always retain the detached particle in its jaws while it was being withdrawn. In this way much time was consumed, and there was always danger that small spicules of cartilage, little peninsula-like pieces, would be left between these little bites, requiring many reintroductions of the instrument. To

avoid this I devised a forcep that would bite out a very much larger piece, and would also take bone; thereby enabling one to rapidly remove those portions of the ethmoid and vomer which were deflected. I also modified Killian's long bivalve speculum, making it much lighter, and with just enough spring in it so that when the blades were introduced on each side of the septum, the perichondrium and mucous membrane would be held well out of the way; thereby avoiding the danger of wounding the latter upon the introduction and withdrawal of the forceps, toothpick mops, etc. I found that in this way the time of the operation was reduced to about thirty or thirty-five minutes.

Dr. Ballenger, however, has modified Killian's knife in such a manner as to greatly facilitate the removal of the cartilage, so that my own forcep now is only used for the bony septum. At the present time the operation requires from 10 to 20 minutes; some cases being very much simpler and more readily done than others. A point that considerable stress should be laid upon is that the elevator should be introduced between the cartilage and the perichondrium; and not between the perichondrium and the mucous membrane. In elevating these structures from the septum one would find it exceedingly difficult to separate the perichondrium from the mucous membrane in the first place, and in the second the hemorrhage would be apt to be very annoying. The greatest care must be taken in cutting through the anterior end of the cartilage while you are on your way to the opposite side through your first incision. It requires extreme delicacy of touch to cut only the septal cartilage and not the perichondrium and mucous membrane. If you do button-hole in here, you are apt to have a permanent perforation of the septum, because the original incision lies immediately opposite this unfortunate button-hole. You can readily understand if this button-hole were done further back that it would probably heal without bad results, as there would not likely be a similar accident on the other side. In most of these cases the hemorrhage is very slight. This varies in different individuals. I had a case some time ago, a strong, healthy man, who did not give a history of a bleeder, who bled so profusely from the first incision that I was finally compelled to stop the operation before it was half way completed. Adrenalin and pressure seemed to have no effect whatever. The blood came out in a

stream, hiding the parts so completely that I did not dare to blindly finish the operation.

Recently I have heard it argued by men who were not familiar with the technique of the operation that those of us who were straightening these deflected septa by the sub-mucous operation were laying up serious trouble for ourselves in the future; as a great many of these patients would eventually have sunken noses, the bridge falling in from non-support. Now, in the first place, this is not a new procedure or an experiment, for the German and Austrian physicians have been doing this operation for the past ten or twelve years, and I believe that they are entirely too scientific to continue doing a thing that was bringing disastrous results upon their patients. In the second place, if one will for a moment stop to think just what structures are taken away and just what are left, he will see that it is next to impossible for the bridge of the nose to cave in. In Dr. Bane's description of the operation he has told you that a pillar of cartilage is left anteriorly running from the floor of the nose up to the roof. Then, too, with the Ballenger knife or with almost any other means that we have, it is exceedingly difficult to remove the ridge running along the superior border of the septum. We always attempt to leave at least one-fourth of an inch of this ridge, which is still further proof against these falling in from non-support. Dr. Freer of Chicago, who has done a great many of these operations during the past few years, claims that the cartilage that has been removed is regenerated again from the perichondrium which has been left.

I can commend most highly this operation to my colleagues and can promise them, if skillfully done, the results will be excellent.

Dr. Black: I would like to ask Dr. Bane if he always makes his first mucous incision in the concave or the convex side.

Discussion Closed.

Dr. Bane: I always make the incision on the convex side, elevating the membranes on that side first, then cut through the cartilage to the perichondrium, next elevate the membrane on the concave side through the cartilaginous opening back as far as the deflection extends, which one can see better on the concave side than on the convex side.

Drs. Bane and McGiffin will move in a few days from the Steele Block to the Academy of Medicine Building, 1434 Glenarm St.

CONSTITUENT SOCIETIES

Boulder.—The Boulder County Medical Society held its regular monthly meeting at the court house Thursday, October 12. Those present were: Drs. O. M. Gilbert (President) Rodes, Rand, Lindsay, C. A. Cattermole, Reed, Russell, Craghead, Campbell and G. H. Cattermole. There were several guests present.

Drs. Roy Wiest of Hygiene and O. P. Johnson of Boulder were elected members of the society.

Dr. H. F. Rand read a paper on *Hydrotherapy*. This paper was of great interest, as the author is an authority on the subject. In brief, Dr. Rand said that hydrotherapy may be defined as a scientific use of water in the treatment of disease. The physical properties of water specially adapt it for use in abstracting heat from or conducting it to the body. The ability of air to absorb water depends on the temperature of the air; this principle may be turned to therapeutic uses. Air which has had its temperature raised without the addition of moisture is capable of promoting evaporation from the skin to a high degree. Cold is a vital depressant under all circumstances and by all modes of application. On the other hand, heat is without doubt one of the most powerful of vital excitants. The effect of the application of either one of these to the body depends: First, upon the mode of application; second, the temperature; third, the duration; and, fourth, the condition of the subject.

Heat increases the rate and facility of the respiratory movements and there is a lessened rate of CO₂ elimination. Applications of heat give lessened irritability of the voluntary muscles and increased irritability of the involuntary muscles. Heat stimulates protoplasmic activity.

Winternitz has shown that from the application of heat we get a marked decrease in the red cells as well as diminution of the percentage of hemoglobin, with a marked decrease in the number of leukocytes. With cold we obtain just the opposite result—an increase of red and white cells as well as hemoglobin.

Dr. Rand cited cases of anaemia and malaria in which the application of cold was followed by cure. The treatment of malaria was to give the patient a cold-mitten rub six hours before the chill. Examination of the blood then

showed a marked increase in the white and red cells and in the amount of hemoglobin. The treatment was repeated in an hour with similar result, and there was a lessening in the number of plasmodia in the blood. The chill did not come. Plasmodia were found in the blood ten hours before the time for the next chill; the treatments were repeated and the chill did not occur.

There was a full discussion of Dr. Rand's paper. He was asked whether he had been able to obtain such prompt results from this method of treatment of malaria in Michigan, and replied that the cure was much slower there.

Dr. Kate Lindsay read a paper on **Infant Feeding** which presents the subject in an up-to-date and common-sense manner. We hope the paper may be published in "Colorado Medicine." This paper was discussed by the members present. Some members expressed the belief that we did not give explicit directions to the mother; others thought that failure in artificial feeding was often due to the ignorance of the mother or nurse. Breast feeding requires the supervision of the physician nearly as often as do the cases of artificial feeding.

The following preamble and resolution was adopted:

Whereas, the City of Boulder contemplates securing certain water rights, which will guarantee a larger amount and better quality of water for the residents of this place; therefore, be it

Resolved, By the members of the Boulder County Medical Society, that they express their approval of the proposed purchase of such water rights, and would urge the city council and the citizens of Boulder to extend the intake pipes to the source of pure and uncontaminated water; as by so doing, the city will secure a more wholesome water supply, and may prevent much sickness and death.

Dr. Gilbert stated that he intended to have the physicians of the county meet at his new office building in the near future, and by vote of the society an invitation was to be extended to Drs. Wetherill and Black to be present at that time.

The society adjourned to meet the first Thursday in November.

G. H. CATTERMOLE, Secretary.

Weld County Medical Society met in regular session in Dr. Pogue's office on the evening of Monday, Oct. 30, at 8 o'clock. The meeting was

called to order with the President in the chair and a large attendance of members. The Society was honored by the presence of Dr. Wetherill, President, Dr. Black, Secretary, and Dr. Ringle, Third Vice President, of the State Society.

The minutes being read and approved, our resolution to the State Board of Examiners and the Board's reply furnished a sufficient theme for attention and discussion. The resolution to the Board of Examiners was first read.

Weld County Medical Society in regular session assembled.

Resolved, That whereas Colorado is the only important state not specifically demanding an examination for a license to practice medicine; and,

Whereas, There at present exists an acute if not chronic congestion of the physician body; and,

Whereas, The law regulating the practice of medicine in Colorado grants the regularly appointed Board of Examiners the right to examine all applicants for a state license:

Therefore, This Society does earnestly petition and request that the Board of Examiners shall exercise their full power and prerogative of requiring a written examination from each and every candidate for a state license who shall apply therefor. By so doing the Society believes that the entire medical profession will be benefited.

The Board in its reply took occasion to administer a slight reproof and mild verbal castigation. They acknowledged the receipt of our resolution and "regretted that the Weld County Medical Society passed this resolution. They begged leave to express the hope that our Society would see the advisability of refraining from a further expression of views or further action along this line." Our Society's resolution was evidence *prima facie* that we "had not had the opportunity of becoming acquainted with the procedure of the Board under the new registration law" and that we understood not the function of the Board. The reply explained that the Board was compelled to admit all qualified persons "however acute and chronic may be the congestion of the physician body as a consequence."

Their duty was plain. Their "sole duty is to protect the public health by seeing to it that persons admitted to practice are qualified to execute their duties." Their method was "as nearly perfect to reach the end in view as had ever been devised—in truth, a most ex-

haustive examination—instituted only after exhaustive research and study.”

The Board did not hold it to be part of its duty to restrict “the profession numerically for financial or equally bad reasons.” And in conclusion, they invited representatives from our Society to be present at the next meeting of the Board.

In paving the way for discussion, Dr. Call presented his report as delegate to the meeting at Colorado Springs, where he had presented our resolution before the House of Delegates and wherein it had been favorably received. Along with Drs. Hall of Denver and Little of Canon City, he had been appointed on a committee to further investigate this matter. A time had been appointed when they were to meet Secretary Van Meter of the Examining Board, but unfortunately the latter had been detained. A few days earlier he (Dr. Call) had made a special trip to Denver to meet the Secretary of the Examining Board. This meeting had not resulted in his acquiring any information or facts which made our position any the less desirable, any the less tenable or any the less essential for the welfare of the physician and the protection of the public health.

Moved by Dr. Church, seconded by Dr. Hughes, that this report be received and adopted. In speaking to his motion, Dr. Church brought to bear a masterly array of facts and presented a forcible argument along the lines and in support of the resolution adopted by this Society. He compared Colorado's present medical law with the law passed in 1881 (this will be presented to Colorado Medicine in a special article on Medical Legislation). In his opinion we were at least ten or fifteen years behind the times in legislative matters. We had reached the point which the State of Illinois had abandoned ten years ago. The present law was the ideals of an idealist and in its execution nowise suited to the requirement of the state.

Dr. Graham, on rising to add a few timely remarks, resented the imputation that our Society lacked sufficient gray matter to intelligently discuss such a question. We were wholly and entirely within our province in raising and submitting any criticism of the state medical law which we considered to be for our interests and pro publico bono. That a written examination in every case was an ideal method, he would not assert, but when other states around us maintain this standard, it was absolutely essential that we should rise to the occasion and maintain a standard equally high. An

overcrowded profession worked to the serious detriment of the people at large. A physician worrying over his needs and requirements is in a poor condition to attend suffering humanity. In addition, lack of good literature and equipment militated against a successful and useful practice. He was inclined to believe that Dr. Church's statement “that Colorado's increase of population was less than 3 per cent per annum” must surely be under the mark. The influx of physicians and their families should surely provide a greater increase.

Dr. Ringle considered that the opinions which prevailed in our Society should be outlined and sent to other county societies in order to create a healthy sentiment in favor of a higher standard of medical requirements. It seemed from the number who were admitted quarterly into our state and the few who failed to gain an abundant entrance that Colorado air and sunshine must have a tonic effect in brightening the intellect. Although our Society had not, it seemed, been subjected to so grave an accusation.

Dr. Wetherill being asked by the President to favor the Society with his views on this question, stated that while he was pleased to be present he was much more pleased to be with us at the time when so important a discussion was before our Society. He congratulated us on the scientific manner in which we took up the subject and on the intelligence, moderation and healthy tone which was displayed. That it certainly was a legitimate subject for a county society to consider, and from the facts and arguments presented he thought we had some considerable support for the views we held and the resolution we had presented. He agreed that raising the standard was not for the protection of the physicians of the state, but solely and entirely that the public should receive the most efficient service.

On motion Dr. Call's report was now received and adopted.

Moved by Dr. Ringle, seconded by Dr. Hughes, that Drs. Church and Call, with the Secretary, constitute a committee to prosecute the ideas which our Society had instituted and to prepare the schedule of minimum educational requirements which they considered suitable for the needs of the state. Carried.

The meeting being now called from labor to refreshments, ascended a flight of stairs to the Masonic banquet room, where after a suitable interim, proceedings continued in a lighter vein. Dr. Graham, our genial and efficient toastmaster, opened the program with a short ad-

dress of welcome to the Denver dignitaries whom, he stated, we were pleased to have among us. He then called upon Drs. Ringle and Dyde, who proposed the health of our State Society and more especially the very good health of its representatives here this evening.

Dr. Wetherill, in response, was pleased to be present. He desired a closer friendship, a more active union of County and State Societies, and likewise State with A. M. A., a combination which would have a great leavening power, an elevating influence for our profession and a political pull which could not readily be overlooked.

Dr. Spaulding of Kersey proposed the health of our "skilled specialists," "renowned educationists" and "city physicians," to which Dr. M. Black responded. Continuing in the line of a closer union between parent and daughter societies, he trusted that Weld County would be well represented at the next state meeting in Denver, both in the audience and on the scientific program. A high standard for state meetings had been set by Colorado Springs, which must be continued. This was only possible by an active interest of each county society.

A vote of thanks was now passed to our delegate, Dr. Call, and the committee associated with him for the splendid manner with which they had furthered our resolution.

A vote of commendation to El Paso County Society was likewise passed for their efficient service and their generous entertainment at the recent meeting in Colorado Springs.

Meeting adjourned at 1 a. m., October 31.

CHARLES B. DYDE,
Sec. Weld Co. Med. Soc.

CORRESPONDENCE

Agnes Memorial Sanatorium Resignations.

Denver, Colo., Oct. 26, 1905.

The Editor Colorado Medicine:

Dear Doctor—Will you please publish the following notice in the next issue of Colorado Medicine and oblige the members of the outgoing Board? Your truly, J. A. Wilder, Sec.

"Not approving of the present policy of the institution, the entire Medical Board, consisting of Drs. Arnold Stedman, W. H. Bergtold, Carroll E. Edson, J. A. Wilder and L. B. Lockard, has resigned from the Agnes Memorial (Phipps) Sanatorium."

Replying to your request for impressions of the Society's last meeting, I shall necessarily be confined to the early sessions.

In common with other associations of men who do things, our Society has for fifteen years heard the wails of "gang, clique and fixers" echoed from one hilltop to another by members of the pack who never got close enough to the game to cause their hackles to rise, much less bring in the game.

Every association of men for purposes secular, scientific or religious has been and will be dominated by a few men, energetic and ambitious for its success, whom those who take an ephemeral annual interest designate by different names intended to express disapproval.

These facts have been peculiarly applicable to the affairs of the State Society for years, and the same old suspicions are brought to the meetings by men of similar processes of cerebration annually—men who are never seen at the Society's committee meetings or taking part in its scientific deliberations. Grown tired of these serial charges of usurpation, two members announced their withdrawal from active participation in formulating the future policy of the Society.

Harmony (?) was instantly apparent, but not the kind promised for years by the malcontents, but rather that which is engendered by the reading of the "Last Will and Testament."

Two aspiring successors to the trust were born instantly and a guerilla warfare inaugurated for imaginary spoils; later dispersed, however, by the Regulars.

A good, healthy clique has been and will be the essential of our Society's prosperity. It is simply the working force of the body organized for work, to which every member is eligible and from which some stand aloof because of personal jealousies or because absence veils a paucity of knowledge medical.

The controlling spirits of the association have been regularly charged with advancing their co-workers to prominent places in its councils. And they have. It could scarcely be expected of a body of men sane enough to practice medicine and ambitious for success, that they would fill the offices with men who rarely attend its meetings, but instead, remain at home to beat the bushes with the methods used by their forebears.

Not a meeting of the A. M. A. passes without one or more members of our Society being honored with high places in it. National associations of specialists frequently take their

presidents from our association. Is it because the Society has been in the hands of a clique, or in spite of it, that its reputation is so good away from home?

The edifying sight was this year enjoyed of a personally grand man raising the cry against "gang rule and star chamber proceedings," who has been at few meetings in twelve years, and then dangled his hat between his knees on a back seat, long enough to have it said that he "attended."

There was no one to rise and charge him with ever having belonged to "a clique."

It is more profitable to retrospect than to prognosticate.

The clique of the State Society has been for fifteen years composed of medical men, self-elected and self-perpetuated, permeated by the well-defined purpose of making executive officers of members most likely to keep the Society moving *pari passu* with the evolution of scientific medicine. One year its presiding officer would be chosen from a little farming community, again from a struggling college faculty; the next, a representative from a competing college was selected; each giving excellent results, although they never for an instant relaxed the college strangle from the throat of the other, while the little pariah continued to howl "clique" from a safe distance.

The pictures of those who have been in the forefront of our Society for years, hung in a gallery, would be instantly recognized by Colorado as representing the progress of medicine and the integrity of manhood.

And every Medical Society, Medical College, Medico-Social set and rural community could point to one or more and say with pride, "He belonged to us."

"The Clique of the State Society." Forsooth!
W.

Pueblo, Colo., Nov. 6, 1905.

Dr. J. M. Blaine, Editor Colorado Medicine,
Denver,

Dear Sir and Doctor—Your letter of the 3rd to hand asking me for my impressions as to the Colorado Springs Meeting of the Colorado State Medical Society, which meeting was held in the early part of October, and I will with a degree of modesty apologize for what I may say, especially if it should grate harshly upon your good tympanum.

While personally I can not speak knowingly of the entire literary program, the general impression, as I gathered it, was that it as a whole was hardly up to the standard of ex-

cellence which has prevailed heretofore, or which naturally is expected from the profession of the state. There were, however, special papers and exhibits that were excellent in the extreme, novel and new, showing the advancement in this state in personal research. These features are to be commended and encouraged, as original research is the only method by which we learn.

As to the entertainment accorded the Society by the El Paso Medical Society, it would be folly to say other than that they quite outdid themselves, entertaining the visitors as never before have they been entertained, totally eclipsing all entertainment in recent years, at least. They have set a pace that will make Denver next year, and those towns which follow, sprint a little to keep up. Let's all unite and congratulate the Springs as to their ability to, and their way of doing things.

As to the business part of the meeting, let us look it fairly and squarely in the face. While it was intermingled with both good and evil, to my mind the predominating element was for good. It is true that medical politics came forth, possibly more prominently than in many years before; still, personalities were not indulged in at all, and certain democratic principles were established, that even now are working well, and in the great future will work much good for the Society, throughout the constituent societies. Instead of the local societies now being able to say that one society or one clique is running the whole thing, they must acknowledge that the plums have been evenly distributed throughout the state and that now as in the future the majority will rule.

Very truly,

CRUM EPLER.

NEWS ITEMS.

Dr. Sol G. Kahn dropped down from the clouds (Cloud City) and renewed his friendships in Denver recently.

Dr. C. H. Call of Greeley was in Denver the first of the month. He claimed to have business with the State Board of Examiners.

Senator W. W. Rowan, the pioneer surgeon of Ouray, enlivened our sanctum one day last week.

Several of our Denver medical friends have recovered from an acute attack of "auto-intoxication" and have gone back to the faithful horse. We are glad to note this improvement and hope others may also recover. It would be eminently safer for those of us who walk.

Colorado State Medical Society

Next Meeting at Denver, October 2-3-4, 1906.

CONSTITUENT SOCIETIES

Times of Meeting and Secretaries:

Boulder County, first Thursday in each month.....G. H. Cattermole, Boulder
Denver County, first and third Tuesday of each month..T. E. Carmody, Denver
Delta County, next meeting March 21st.....A. L. Hick, Delta
Eastern Colorado Medical Association.....G. B. Bilsborrow
El Paso County, second Wednesday of each month.....
.....M. P. Reynolds, Colorado Springs
Fremont County, first Monday of January, March, May, July, September and
November.....R. C. Adkinson, Florence
Garfield County, first Friday of January, March, May, July, September and
November.....L. A. Robinson, Glenwood Springs
Las Animas County, first Friday of each month.....J. G. Espey, Trinidad
Larimer County, first Wednesday of each month.....E. Stuver, Ft. Collins
Lake County, first and third Thursday each month.....H. A. Calkins, Leadville
Mesa County, first Tuesday in each month.....A. G. Taylor, Grand Junction
Montrose County, monthly.....H. M. Collins, Montrose
Northeast Colorado.....J. C. Chipman, Sterling
Otero County, second Tuesday in each month.....E. G. Edwards, La Junta
Ouray County, first Friday in each month.....W. W. Ashley, Ouray
Pueblo County, first and third Tuesday in each month....M. J. Keeney, Pueblo
San Juan and La Plata Counties, first Friday in January, April, July and
October.....H. C. Turrell, Durango
San Luis Valley, next meeting in May.....A. R. Pollock, Antonio
San Miguel, third Saturday in each month.....I. R. Bancroft, Telluride
Teller County, fourth Tuesday in each month.....H. G. Thomas, Victor
Weld County, last Monday in each month.....Chas. B. Dyde, Greeley

Colorado Medicine

THE OFFICIAL ORGAN OF THE COLORADO STATE MEDICAL SOCIETY AND CONSTITUENT SOCIETIES

PUBLISHED MONTHLY BY THE SOCIETY

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CHANGE OF ADDRESS

Our exchanges and those wishing to correspond with COLORADO MEDICINE will please note that the address has been changed from 1434 Glenarm St. to Room 3 Steele Block.

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Colorado State Medical Society

The Next Meeting Will Be Held at Denver
October 2-3-4, 1906.

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COLORADO MEDICINE

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VOL. II

DENVER, DECEMBER, 1905.

No. 12

EDITORIAL COMMENT

THE FIGHT AGAINST SECRET NOSTRUMS.

In the struggle which is now begun between the makers of secret proprietary medicines and the organized medical profession, two powerful blows have been struck for scientific medicine by Prof. Horatio C. Wood of Philadelphia and Prof. Frank Billings of Chicago. The address of the former on *Proprietary Therapeutics*, given before the Columbus Academy of Medicine, was published in the *Journal of the American Medical Association* for June 10th, 1905. The paper of the latter on *The Secret Nostrum Evil*, read before the Section on the Practice of Medicine of the A. M. A. at its Portland meeting, has just appeared in the journal for December 2nd. No one who wishes to be in touch with the most important movement now occurring in modern medicine should fail to read and re-read these papers.

Dr. Wood shows how the nostrum mongers "recognize the necessity of poisoning our sources of information, and exert every effort to the debauchery of the medical press." Dr. Billings points out that "Technically there is no difference between the secret proprietary medicines manufactured for physicians' use and the 'patent medicines' exploited to the public. Both are protected by a copyright or trademark name. Both are protected for an indefinite time."

"The relation of the physician to these preparations, however, is very different. Those 'patent medicines' which are advertised to the public are not considered

ethical; and physicians abhor them and rightfully condemn their use because they are often dangerous and always irrational as remedies. On the other hand, the manufacturers of those copyrighted proprietary medicines which are exploited to physicians by extravagant claims of specific therapeutic action, use the doctor as the middleman to distribute the cure-alls to 'the public.'"

Dr. Billings illustrates the absurd position of the doctor who puts his faith in secret proprietary preparations by reference to the report of the Council on Pharmacy and Chemistry on acetanilid mixtures (J. A. M. A., June 3, 1905, page 1790). The Council reported on six of these mixtures, which are most widely advertised in medical journals. Most of these were claimed to be true medical compounds of most marvelous and universal powers of relieving pain. They were all found to be mixtures of acetanilid in proportions varying from 43 per cent. to 76 per cent., commonly with sodium bicarbonate or ammonium carbonate, or both, and caffeine in varying proportion. Dr. Billings asks: "What physician will be foolish enough to use these preparations, when he can get the same of his druggist for at most one-tenth of the cost, but especially what physician with a particle of medical knowledge would think of giving acetanilid if he knew it, in the majority of the conditions in which, according to the advertisers, these nostrums are indicated?"

When we reflect that these mixtures sell at the rate of \$16 to \$20 per pound, while acetanilid can be bought at 30 to 40 cents per pound, it is not very difficult to understand where the money comes from

that is being used for "the debauchery of the medical press." It is also easy to see that the movement to free our medical journals from the disreputable practice of advertising secret nostrums will be strongly and bitterly opposed.

As Dr. Billings says: "The movement will have the most determined opposition that money can bring. Millions are being made annually by the nostrum manufacturers, and they will not sit idly by and see this wealth-producing business done away with if they can prevent it. It will not be an open fight, for their business will not stand publicity. They will have with them those so-called medical journals which are published solely in their interests.

"This movement will have the sympathy of every thinking physician of the country, but sympathy does not win battles. In this fight those who are representing us should have all the support we can give. In society meetings especially we should aid in the propaganda by helping to enlighten and to interest those of our profession who have given the matter no thought. We should support these journals which represent us, and not tolerate in our offices those that we know to be subsidized and to represent their advertisers rather than their readers."

PUZZLE PICTURE.

On a certain street in Denver a certain medical man with unethical tendencies does business on a large scale. His patients are so numerous that often they are compelled to sit on benches outside the large office building. He agrees to cure tuberculosis at so much per, and, of course, the transaction is strictly on a cash basis.

Recently a poor unfortunate put up all his money but got no benefit from the advertiser's methods. He then sought out a member of the Denver County Medical

Society, who listened patiently to his tale of woe and then out of *pure charity* agreed to treat him free, provided he would go each morning to the waiting multitude outside of the office of the advertiser and advise them to seek relief from the aforesaid member of the Denver County Medical Society who doesn't advertise (in the papers).

Puzzle: Find the quack.

ORIGINAL PAPERS

THE RADICAL MASTOID OPERATION FOR THE CURE OF CHRONIC OTORRHOEA.

By JOHN M. FOSTER, M. D., Denver.

As far back as one goes in the history of medical literature he finds evidences of running ears; and the inadequacy of the treatment for the same is manifested by the amount written and the innumerable remedies suggested for their cure. In the time of Galen and during the middle ages we find how helpless the profession was to alleviate or cure this condition, which is now appropriately called chronic suppuration of the middle ear. For hundreds of years it was an instance of the blind leading the blind, for the teacher could not instruct his pupil in any method that promised to cure but a certain percentage of these cases, and the great balance was left as a menace to the patient and an offense to the eyes and nostrils of mankind.

During the middle of the last century otology began to assume a scientific footing and the anatomy of the ear was fairly well understood; but even then no progress was made along the lines of curing the more serious conditions. Some forty years ago Sir William Wilde, the eminent Irish otologist, said that "we can never tell how, when, or where, a chronic discharge from the ear will end, and what it

may lead to;" and even as late as 1892 one of the most progressive and eminent ear men in this country said, "we find that the most careful and skillful treatment cannot always succeed; and in some rare cases in spite of our best efforts the patient goes on to his doom." Never a word, never a thought of curing these cases excepting by douches, sprays and powders. When we think of the great and important anatomical relations of the tympanic cavity, is it a wonder that an ulcerative and carious process in its walls can and often does lead on to destructive and fatal consequences? The vault of this cavity being separated from the meninges by a thin and rarified bony plate; the floor lying immediately above the great jugular. Its internal wall is in apposition with the labyrinth containing the expansion of the acoustic nerve, and separated from the facial by a thin bony plate. Anteriorly it is in close proximity to the carotid; and posteriorly through the mastoid cells almost in contact with the lateral sinus. Notwithstanding all of these facts, even now we find occasionally a physician well posted in other respects, who pays little attention to the seriousness of diseased and running ears, and who is somewhat loath to have them "meddled with." It would seem that the offensive odor and the disgusting appearance of this discharge would be enough in themselves to cause the patient and physician to demand alleviation.

Text-books written a decade ago show us still groping in the dark as to any certain method of curing these cases. The task of bringing this disease under rational and scientific means of relief and cure has been left to the hands of the otologists of our own time, who have developed and elaborated these means during practically the last ten years. Until that time it was a reflection upon the medical profession that so many of these people were turned away with no hopes of

cure, and were told that they had a life-long struggle ahead of them, and even under the best of care they must constantly face the dangers of an extension of this inflammation to the brain or some other vital point.

After the profession had tried in vain for centuries all manner of medicinal means of cure, and found failure to attend their efforts in a certain large percentage of cases, a few men, bolder in spirit than their predecessors, entered the field of operative research, and step by step elaborated the method that we now designate as the Stacke-Schwartz, or Radical Mastoid Operation. The honor of much of this work must be credited to the men whose names are linked so closely to this operation—the operation that is done in its essential details by most of the operators of this day.

These operations one does not contemplate doing on any cases excepting those that have persistently resisted all forms of local treatment. In the early stages of chronic otorrhœa many of these cases are cured by the constant personal attention of the physician, aided by the patient and family. Frequently, too, when such means as these fail, the removal of the ossicles will produce a cure. A large percentage of these cases are cured by these means, but a certain number are not cured, and it is with these very cases that are obstinate and intractable, that this paper deals, the cases that go on from month to month and year to year and resist all forms of treatment; the cases that have the offensive, often corroding discharges that constantly persist; the cases that finally end with the disgusting smirk and uncovered eye of facial paralysis, the stupor and stertor of meningitis, the abscesses of pyæmia, or the alarm and horror of carotid hemorrhage. These were the cases that awed and discouraged our forefathers, and even when they were fortunate enough to cause a discharge to cease,

they lived in mortal terror that every simple cold in the head might cause a recurrence and lead on to the fatal consequences of cerebral meningitis.

The indications for this operation are well marked, and are imperative in those cases of acute mastoiditis following a chronic discharge from the ear. These cases do not admit of delay.

The indications are as strong, but not so imperative as to time, in all of these cases where a chronic discharge persists after six weeks' or two months' constant personal attention of the physician, especially if he can demonstrate necrosis or caries of the temporal bone, or collections of epithelial scales known as cholesteatoma. Time and experience has demonstrated that these cases are not susceptible of cure by the ordinary means; and the danger of allowing them to take their course is far greater than the means that we adopt for their cure, for we now know that if skillfully done it may be said that the operation in itself is not dangerous. Unfavorable terminations are rare. The effect of the procedure upon the ear is almost invariably favorable, and in the greater majority of cases the hearing is slightly improved.

We now know that these cases can be cured, and the cure is so complete that we do not have to fear that at almost any time an inflammation of the ear may again be set up and be followed by a meningitis such as was dreaded by former prominent authors upon this subject; and the consequences of this disease, such as cerebral abscess, pyæmia, paralysis and fatal hemorrhage, are no longer hanging over the victim's head. This, the radical mastoid operation, is one that differentiates itself very thoroughly from the ordinary operation, "the Schwartz," that we do in acute cases. While in the latter we content ourselves with removing thoroughly all the mastoid cells and all necrosed bone and enlarging the opening between the an-

trum and tympanum cavity, thereby making free drainage for pus and secretions; in the radical operation we go much further, and not only clean out the mastoid when diseased, but take away part of the posterior bony canal wall, remove the ossicles and take away the overhanging wall of the attic and also the necrosis of the walls of the tympanum. We then curette thoroughly the opening into the Eustachian tube, thereby destroying the membrane so as to close off this cavity from the throat and its mucous lining. In this way we not only remove all diseased tissues, but convert the tympanic and mastoid cavities into one, allowing the parts to heal as one large, smooth cavity. As you can see, this is radical and to some it may seem too dangerous a proceeding, but after seeing the great number of cases that are cured and only encountering a very rare case where there is untoward consequence, we have found that it is much more dangerous to let a case of necrosis of the temporal bone alone, than to do this operation.

I will endeavor to demonstrate the technique of this operation upon the cadaver which I herewith present, upon which I have done a radical mastoid operation on each side. Upon one side you will notice that I have left the wound open, exposing the entire extent of the operation, showing you how thorough and extensive the procedure is. Upon the other side the same operation has been done, but the soft parts have been brought into apposition and you can readily see how the packing and cleansing is done through the external auditory canal, the membranous portion of which has been split and turned out into the cavity where the flaps are held in position by catgut sutures, the "Panse method." These retracted flaps form a partial lining for this large bony cavity and give a starting point from which the dermitization spreads over its entire extent. This

process is frequently aided by skin grafting, which acts very favorably in these cases, shortening the time of healing.

Immediately after completing the operation the cavity is swabbed out with 33 per cent. carbolic in water, followed by 90 per cent. alcohol to neutralize it. The posterior or mastoid incision is closed by interrupted silkworm-gut sutures and the cavity packed through the enlarged external auditory canal with narrow strips of iodoform gauze, care being taken to press the flaps outward against the bony cavity, thereby holding them in place so that they heal in this position.

Unless there is much pain, or a temperature running over 101° , the dressings are not changed until the end of the fourth day, at which time the silkworm-gut sutures are removed, the wound having firmly united. At the second dressing do not pack with gauze, on account of disturbing the granulations in removing. Use instead perforated rubber drainage tube. The dressings will have to be changed every two or three days until healing takes place.

I have also taken the liberty of presenting a few of my recent cases that have been cured by this method, some of these ears having been the seat of disgustingly offensive discharges for a number of years. I beg that you will notice the small amount of deformity resulting in these cases, largely due to the initial incision being placed close to the posterior border of the attachment of the auricle, this is aided, too, by the early removal of the silkworm-gut skin sutures, that is, on the fourth day.

In one of these cases you will notice more deformity than in the others. That was caused by an attack of facial erysipelas developing on the second day, involving the entire head. The swelling tore the sutures out of the wound, and it was impossible to get good apposition afterward. Notwithstanding this slight

deformity, you will notice that the parts have healed and the result is good.

This little 3-year-old is presented on account of the rarity with which children of this age are operated for this trouble. This child had a purulent discharge from this ear for over a year and the past six weeks the mastoid had been implicated as shown by marked redness, tenderness and swelling over the post-auricular region. Upon operation a large periosteal abscess was found running from above the auricle downward and posterior to the tip of the mastoid. This cavity contained large purplish granulations. After exposing the bone thoroughly a large sequestrum of bone was removed, exposing the dura and lateral sinus. After removing all dead bone the radical mastoid operation was completed. The ossicles had sloughed away and the roof of the attic was necrotic. This child made a rapid and uneventful recovery.

This young man gave a history of mumps eight years ago, followed by a purulent discharge from the left ear, which has continued since. Six weeks ago the left ear became painful, neuralgic pain in the head, and the discharge had greatly increased. This was continuous. Eight days previous to operation the pain became well located over the left mastoid. Particularly painful at the tip. Discharge was still more plentiful. Last few nights he had not been able to sleep. Upon examination found the left canal full of thick, creamy pus which had a slight odor. Posterior superior wall of canal was deeply injected and sagging. There was puffiness and exquisite tenderness to pressure over the mastoid. Temperature had been running from 97 to 99. Advised immediate operation. Operation June 5th. Found mastoid cells filled with thick, creamy pus which had perforated the cortex. The lateral sinus was exposed $\frac{3}{8}$ of an inch and its walls were roughened and granular. This ear healed

very rapidly and all discharge had ceased in four weeks. You will also notice that there is a very slight mark from the incision now. His hearing has increased.

The other cases that I herewith present have no marked features except to demonstrate that these cases are cured and leave very little deformity after operation.

Discussion.

Dr. Melville Black: I have come to believe that the radical mastoid operation, which at one time was so dreaded not only by the operator but by the patient, is one that does not involve nearly the amount of danger that we at once supposed. It is an operation comparatively simple, it is almost invariably attended with good results, and is one that should be more frequently performed. I think four or five years ago we dreaded doing this operation and the patients dreaded having it done because we feared facial paralysis. I have almost ceased to fear facial paralysis from this operation. Formerly I used always to tell my patients that that was the one danger, and when I explained to them what facial paralysis meant, naturally they looked upon it with considerable dread. One does not care to go through life with a face half paralyzed. But I do not now believe there is any particular reason why the facial nerves should be disturbed, providing the operator is careful and is familiar with the anatomy of the parts. That bugbear removed, there practically is no danger in doing the operation, and the patient certainly is removed from very grave dangers to life, the inconvenience and annoyance of a constantly discharging ear, and the pain that very frequently accompanies these processes. I have a flap that I think is peculiar to myself, so far as I know, that has given me the greatest satisfaction, and judging from my past experience with it I think I shall continue to use it and I would like to have others do so. It is a V-shaped incision the apex of which is one and a half inches behind the auricle; the two arms run forward and terminate one above and the other below the auricle. This gives me a flap which can be replaced accurately in position, and this is an important point. The suturing is over solid bone and not over the bone wound as in the curvilinear incision directly behind the auricle. There is less liability of stitch abscesses, there is no depression of the part over the bone wound, and the scar resulting is less

noticeable. I have always got union by first intention. The sutures are removed in five days and all the external dressings taken off the patient's head, which is a very distinct advantage. The patient often asks you, "How long am I going to be confined with this operation?" The radical operation does not confine the patient as long as the acute mastoid operation, so far as strict confinement is concerned, because as soon as you can get these dressings off the head the patient goes about his business the same as usual, and the future dressings are carried out through the external auditory canal. Another point that occurs to me and one I feel sure is overlooked by a great many operators—I notice Dr. Foster speaks of it particularly—is curetting the Eustachian tube. This is a very important part of the radical mastoid operation. If the Eustachian tube is not curetted the after-healing process is liable to be prolonged unnecessarily. But if the Eustachian tube is curetted it heals quickly and the whole part skins over with greater rapidity than if it is not done thoroughly. I want once more to say that I believe the radical operation should be performed a hundred times where it is performed once today.

Dr. Davenport: I appreciated the doctor's paper very much. With the statistics given by that princely operator on the mastoid in his recent treatise on the operation for acute mastoiditis, I do not see how anyone could object to the radical mastoid operation in chronic otorrhoea. Dr. Whiting says, without complications all cases of mastoid operation get well if they are properly done. In the operation under discussion there is no involvement of the mastoid cells proper. The operation is done simply for chronic otorrhoea and not for mastoiditis. The mastoid antrum, of course, is nearly always diseased in this condition. I agree with the doctor in everything he says. But the flap which Dr. Black proposes, I do not believe to be the best. My recent experience in this line has been that sometimes we have to open up the artificial opening made in the operation. I suppose all of you gentlemen have had this experience. I recently had a case, a young lady who had consulted Dr. Foster for suppurative otitis and he advised operation, but the patient got scared and went back to New Mexico. She finally came to me and I operated for chronic otorrhoea, doing the radical operation. The next day the wound was full of pus and I had to open it up, whereas if I had had the flap which Dr. Black speaks of, I would

have had to make a new incision through the soft parts. As it was, I just simply ripped the stitches open and drained the wound as in the acute operation, and she got along nicely, making an uneventful recovery.

Dr. Bane: I heartily approve of what Dr. Foster has said, also a great deal of what Dr. Black has said with reference to the radical operation for chronic otorrhoea. I do not believe Dr. Black means to convey the impression that the operation is a very simple operation and that there is no danger of paralysis resulting. After operating a good many times we come to feel more at home, and to look upon the operation as simple as compared to what it was when we first began the work. But it really is not a simple operation and it is not free from danger. In going into the eburnated bone, as you have to in most of these chronic cases, you don't know how soon you are going to strike the lateral sinus, because the bone is very dense. When you do open the lateral sinus accidentally you may have no trouble, but I prefer to open it intentionally rather than unintentionally. As to facial paralysis, there is danger of injuring the nerve and one needs to be on his guard always. The best of operators have had paralysis occur in their work even though they were very familiar with the anatomy and careful in their operating. My experience in chronic mastoid operations is limited to about twenty-five cases. I have been with Dr. Foster during many of his operations and I am satisfied that the radical operation is the thing to do for the chronic cases of otorrhoea where there is evidence of diseased bone. These patients are carrying a magazine about with them, and they never know how soon it is going to explode, causing meningitis. I wish to be understood as disagreeing with Dr. Black in his statement about the operation being simple, lest some of you undertake to open up the mastoid without having previously done some work on the cadaver. Last year I did my best in trying to save a patient after a physician, who is a very good general practitioner, had operated upon a case of chronic disease of the middle ear. The first thing he did with his drill was to cut the lateral sinus, and when the patient came out from under the anesthetic the face was paralyzed. Five days later the patient had a chill, and thrombosis occurred. The man died from sepsis about ten days later. The radical operation is not free from danger, yet there is really less danger in doing the operation than in not doing it when it is needed.

Dr. Bull: These cases do not all get to the specialist. We general practitioners see quite a number of them, and to my mind this matter becomes very largely a question of drainage. From my observation from having operated a number of cases of chronic infection of the mastoid where there was a discharge from the external auditory canal, I have observed that the discharge stopped as soon as it was drained through the free opening into the mastoid. There is a little trick that I have followed in locating the mastoid antrum, which, perhaps, is familiar to many of you here, but I find that I can pass a probe down along the posterior wall of the external auditory canal and enter it into the point of the mastoid antrum, and it is quite helpful in locating the antrum. In regard to the dressing, I have never dressed through the external auditory canal because the cases that I have seen are mainly infected cases and acute cases where primary union in the post-articular wound was not secured. But I think where we open up all of the infected mastoid cells and drain thoroughly we almost uniformly get good results when the otorrhoea comes from infected mastoid.

Dr. Foster: I am very glad to see the amount of discussion that this paper has brought out, and the almost unanimity of opinion in regard to it. As far as the initial flap or incision is concerned, I do not think there is a great deal of advantage in one over another. I have never had, except in this case of facial erysipelas, one that did not heal by first intention. They almost always do. I never had any abscess or trouble of that sort. I do not know but what Dr. Black's flap may be better than the one I have been in the habit of using; simply I have not used it, and he has, and gotten good results. We are both probably pretty well satisfied and probably will continue to do what we are doing. The doctor who spoke last, I think, has confused the subject of this paper almost entirely with the acute mastoiditis. This paper does not deal at all with the acute trouble. We all know by opening the mastoid cells and draining through into the tympanum a large proportion of these cases get well. We know that by simply cleaning that out and getting drainage we will cure a great many of them. Years ago when I first commenced practicing medicine we simply broke through the cortex and were very glad to see pus, and very, very glad to stop when we did see it. We didn't dare go any farther. But in these days I think there are very few ear men who would quit before they had removed

every particle of diseased bone. One of the physicians asked me if I had done this operation on a tubercular patient. I do not think I ever did, and out of all the men I have seen do operations in Denver and elsewhere, I do not think I have seen one who has done it on a tubercular patient. I often do an operation on an acute case in tubercular patients, and they do quite as well as with a patient in good health. But I never operated a chronic case in a tuberculosis patient.

EAR SEQUELAE OF ADENOIDS— A REPORT OF CASES.

By R. G. DAVENPORT, Trinidad, Colo.

Adenoids are responsible for a larger number of ear sequelæ than most diseases of childhood. Reviewing authoritative medical statistics on the subject, one can not help but feel surprised at the enormous destruction left in the wake of these harmless-looking little masses of lymphoid tissue hidden away in the naso-pharynx. I shall not tax your patience by giving a long list of the different diseases which some authorities ascribe to adenoids, but shall confine this paper to the auricular sequelæ of hypertrophy of the pharyngeal tonsil.

Schadle says: "Adenoid tissue seems to furnish an inviting soil for the development of bacterial life, and it is also endowed with the power of absorbing infectious matter." As all naturally inspired air has to pass through the naso-pharynx and over the pharyngeal tonsil, it is no wonder that that organ becomes contaminated and thereby acts as a formidable and dangerous nidus of infection to the Eustachian tubes and to all other accessory sinuses of the nasal cavity.

Adenoiditis produces deafness in one of the following ways:

(1) Stenosis of the tube by pressure or irritation, thereby shutting out the air supply to the middle ear, and by interference with the circulation. (2) By a free exudation, laden with infection, en-

tering the tympanic cavity through the tubes, producing suppuration of the middle ear and of the mastoid. Dr. A. Brunner reports having found deafness in 90 per cent. of children in whom there were adenoids. Dr. Y. Arslan asserts that "out of 426 adenoids 69 per cent. had symptoms of nasal obstruction; 37 per cent. suffered with tonsillitis or pharyngitis; 59 per cent. had ear complications, of whom 110 were cases of suppurative otitis and 142 were cases of deafness without suppuration." In the *Journal of the American Medical Association*, White reports 197 cases of middle ear affections out of 565 cases treated for naso-pharyngeal trouble. Wroblewski found 57.5 per cent. out of 160 deaf and dumb patients examined, with adenoid vegetations of the pharynx. McBride and A. Logan Turner writes that "out of 500 cases, 304 were more or less deaf. Of these 304, 22 were deaf in one ear only." In 75 children operated for adenoids I found only 5 to have perfect hearing. Of these 5, none were over 10 years of age. Forty-nine had enlarged tonsils; about one-half had nasal obstruction, and 1 had a mastoid abscess. It will be seen that the results of the examinations obtained by the different operators are widely at variance—the highest record given is 90 per cent. and the lowest 57.5 per cent. It must also be noted that the record of only one man reached as low as 57.5 per cent., while those of the others were much higher. The evidence is decidedly in favor of the theory that adenoids, in the vast majority of cases, leave a bad effect upon the hearing. In fact, so common is disease of the middle ear a sequelæ of adenoids, I believe that every child brought to the aurist for treatment of middle ear trouble should have a thorough examination for adenoids, and, whenever found, their removal should constitute the first step in the treatment of the ear disease.

Grunwald says: "In children adenoid vegetations of any size must always be removed, because the consequences, especially the deafness, while they may not be marked at the time, rarely fail to make their appearance later, when it may be too late to correct them."

TREATMENT.

It is quite generally conceded that no medical treatment is of any value for the relief of adenoid vegetations. Our grandfathers advocated such measures as: removal of the growth with the finger-nail, which was allowed to grow long and kept sharp for this special purpose. Some favored applications of chemical caustics to the tonsil. At a later period the electro-cautery came in for its share of advocates. Even at this day it has its adherents. The great danger of an infection by the finger-nail method is apparent to all. Chemical caustics and the electro-cautery should never be resorted to, as the reactionary effect is dangerous to the Eustachian and tympanic structures. The only rational treatment for adenoids is a thorough operation, in which the growth should be completely removed. Many instruments have been invented for this purpose, but the one most generally used is the curette devised by Gottstein, or some of its modifications.

Every operator should have at least three different sizes to select from, according to the size of the growth. To place the instrument over the growth it must be held between the fingers like a pen until it passes behind the soft palate, care being exercised to avoid injuring the uvula. It is then grasped firmly in the hand and pushed backward and upward against the wall, and with a rotary sweep downward the instrument is withdrawn. The tumor is usually brought out in this manner, but it occasionally hangs by a shred, in which case it may be pulled out with forceps. It also sometimes happens that, in coughing, the child blows the ton-

sil into the nose, in such an event it may be drawn out through the anterior nares.

The following cases are good types of the disease and may be of interest:

Case 1. R. D., aged 9. Was brought to my office for suppurative otitis of the right ear. He gave a history of a discharging ear of four years' duration. Patient occasionally suffered with earache. Discharge was more profuse whenever he had a cold. An examination showed a large opening in the drum. Hearing defective on both sides but worse on the right. Both tonsils were greatly enlarged and there was a large mass of adenoid tissue in the naso-pharynx. The boy was a typical mouth breather. Under general anæsthesia, both tonsils and adenoids were removed. No treatment was given for the ear trouble afterward. It is now three years since the operation was done and the patient has had no return of the discharge, and the hearing is practically normal.

Case 2. My own little boy, aet. 2 years. Had a discharge from the right ear whenever he had a slight coryza. The left ear seemed perfectly normal. During the attacks of coryza, which were rather frequent, he was unable to breathe through the nose. He had earache frequently. I took him to Dr. Richard Jordan, of Knapp's institution in New York, who diagnosed adenoids. One year later I removed the adenoids, and at this date, two years after the operation, he has had no ear symptoms whatever.

Case 3. G. S., aged 5 years, referred by Dr. Grass, had marked retraction of the drum membranes; complete stenosis of both tubes; hearing one-half in left and two-thirds in right ear. Mouth breather. He had enlarged tonsils and adenoids. Under chloroform anæsthesia, the tonsils and adenoids were taken out. The hearing is now perfectly normal. The tubes are open, and the patient breathes naturally.

Case 4. On July 11th, 1905, Jose K., aged 13, native of Missouri, was brought to me for nose trouble. She had been sent to Colorado for asthma. She had not been able to breathe well through the nose since she was 2 years of age. Patient had tinnitus aurium in both ears. The examination showed an enlargement of the tonsils, and adenoid vegetations. Left nostril had an enlarged inferior turbinate and a spur on the septum. Right side had an enlarged turbinate. With free applications of adrenalin chloride 1.1000, I was able to shrink the right nostril enough to allow a partial flow of air through that side, but several efforts with the same solution on the left side proved unsuccessful. With cocaine anæsthesia, both tonsils and the vegetations were removed, and, a week later, under chloroform, I removed a large portion of both hypertrophied turbinates and sawed away the spur. Her respiration is now perfectly normal—no symptoms whatever of asthma. The tinnitus aurium has disappeared entirely.

CONCLUSIONS.

An observation of the statistics of the various operators, and that of my own experience in this line, leads me to believe that the greater part of all ear affections of which there does not appear to be a cause, may be placed to the credit of adenoids which existed at some previous period in the patient's life. In adults many cases of stenosis of the tubes, with consequent retraction of the membranæ, show no cause present for their existence. We know that adenoids often shrink and disappear entirely. It, therefore, does not seem improbable that these cases, of which there are no histories obtained of the exanthemata or other cause for the impairment, may have had adenoids at an earlier date which left their marks upon these delicate organs.

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Discussion.

Dr. Boyd: I believe in the importance of the removal of the growth in cases of suppurative otitis or mere suppuration, and I believe that in children the examination should be made with the curette.

BRONCHIECTASIS: REPORT OF A CASE.

By O. M. GILBERT, M. D., Boulder, Colo.

This case came under my care on Aug. 19, 1903, with the following history:

G. D., age 15, male, student, American, residence Chicago. F. H.: Good except that two paternal aunts died tuberculous. P. H.: Was very healthy as an infant, but in early childhood showed a tendency to catch cold and cough rather severely—coughed more or less every winter and after ten or eleven years of age was seldom free from cough. Had a serious attack of pneumonia at 6 years of age and recovered slowly.

On September 1, 1902, he came home from school with cough and fever which lasted for six weeks; in fact, cough continued from that time, with occasional fever but practically no expectoration. In January, 1903, he was taken with pneumonia in right side and was very low and recovery was slow and imperfect. The cough at this time became very severe and expectoration became profuse. Pleurisy with effusion was suspected and a large number of exploratory punctures were made, but it was finally decided that there was no effusion.

Fever and expectoration continued—the latter becoming more profuse—until I saw him in August. At that time he presented the following conditions:

Medium build, fair complexion, somewhat pale and emaciated, weight 98 pounds, temperature $99\frac{1}{2}$, pulse 103, respiration 28, tongue good, skin dry, appetite fair, bowels regular, sleeping well, some dyspnoea upon exertion, coughing more or less constantly but having a very severe paroxysm mornings when he would raise 6 to 8 oz. of muco-purulent material which had a foul, sickening odor and upon standing in a bottle would separate into three layers, a frothy, grayish layer on top, then a clear mucous layer and a yellowish granular layer beneath, which upon microscopical examination was found to contain a large amount of epithelial debris, leucocytes, staphylococci and strophococci, but no tubercle bacilli or elastic tissue.

After his morning clearing he would feel much relieved. His blood showed 70 per cent. hemoglobin and his urine was normal. On physical examination I found no supra- or infra-clavicular depression, no abnormal pulsations except that the apex beat was immediately to the left of the sternum, expansion was full and free in the right upper front as well as all over the left, but in the lower right there was practically no expansion—about three-quarters inch.

On percussion the whole thorax except over the middle and lower lobes of the right was decidedly hyperresonant and there was exaggerated vesicular breathing. Over middle and lower right there was general dullness on percussion, but one place in mid-axillary line, about sixth rib, and another near angle of scapula, there was a slight tympanitic note, shading off into a decided dullness.

On auscultation there was heard over the right middle and lower lobes the great-

est variety of sounds, including rales of every description, broncho-vesicular and bronchial breathing, and in a few places—especially over areas mentioned as giving tympanitic note on percussion—there was a distinctly cavernous sound. Skodas “veiled puff” was not distinctly heard. The auscultation and percussion sounds were, however, extremely variable both in position and character—at times no cavernous sounds were to be found.

The diagnosis of bronchiectasis was made, and along with the usual hygienic precautions, creasote inhalations were ordered, which decidedly reduced the fetor but did not otherwise affect the course.

He remained under my observation from that time on, except for about five months spent in Yuma, Arizona, and during that period there was not much change in his condition, except that his periodical attacks of acute bronchitis with pyrexia became more frequent—an average interval of six to eight weeks—during which temperature would only reach $99\frac{1}{2}$ and 100, but during the acute attacks from 102 to $104\frac{1}{2}$. During these attacks there was always a diminution of the expectorated material. He also lost in weight relative to height and toward the last, absolutely, and the expectoration became less offensive. There became a decided retraction in the right axillary region, the apex beat receded behind the sternum and systolic pulsation appeared in the fourth and fifth right interspaces.

The fingers became decidedly clubbed at the extremities. Conditions gradually becoming worse and the cavernous signs more marked, the possibility of drainage was considered, and after consultation with Dr. J. N. Hall we decided upon this as a dernier resort, and consequently on August 20, 1905, he was anesthetized—chloroform being used—two inches of the seventh rib in the post axillary line re-

sected, after which the pleural cavity was opened and, emitting an odor similar to that of the expectoration, the hope was entertained that there might be some connection between the pleural cavity and some of the bronchiectatic cavities, and as pleural adhesions were at any rate not an undesirable thing, it was decided to stop and await development.

Our hopes, however, proved to be unfounded, for there was no discharge of sputum from the wound; so five days later, August 25, he was again anesthetized and an aspirating needle introduced into the lung in various directions—especially in the region of the cavernous sounds—and wherever a little mucus was found it was followed by a slender uterine dressing forceps, the blades of which were somewhat opened and withdrawn, but we were only able to get a small amount of the secretion from any one place.

The pleural cavity was drained by a rubber tube and some of the mucopurulent material continued to drain away, but only an infinitesimal quantity compared to the amount expectorated. At the first operation numerous adhesions were found, but between these the pleura was soft and normal and the lung had, in places, a slightly emphysematous feel, in others rather firm. At the second operation there were quite firm recent adhesions where previously free.

The patient did well for five days after the operation, when he developed pneumonic symptoms and died on September 1—one week from the second operation.

A limited autopsy was permitted, and on opening the thorax the left lung was found to be in a state of compensatory emphysema throughout, but was otherwise normal. The upper lobe of the right lung was collapsed—*since* the operation, because it was felt to be expanded at the first operation. The pleuræ of almost the

entire middle and lower lobes of the right lung were adherent. Upon following the trachea to the bifurcation one could see a marked difference between the two bronchi; the left was normal and smooth while the right presented a red granular appearance and at the first subdivision was studded with rough cartilaginous and calcareous particles and the lumen was much narrowed; the one leading to the upper lobe was much less so than the others.

Following this down to tubes of the third and fourth order, numerous cylindrical and fusiform dilatations were found of every size, varying from the normal to the size of the patient's thumb. These were often in close contact with one another and occasionally communicated. They varied in length from that of a navy bean to two inches; a *few* were peripheral and round enough to possibly be termed saccular. Surrounding the dilatations and sometimes connecting them was a dense cicatricial tissue, and the normal elements, such as cartilage, were much hypertrophied, and there was a general interstitial thickening as well as recent consolidation. The lining of the dilatations was even more granular than the tubes before mentioned, and in some places presented much the appearance of an ulceration.

The opening into the cavities and exit from were gradual and not abrupt as in a tubercular cavity. One of the largest, situated in the lateral region of the lower lobe, had a recent communication with the pleural surface, but gave evidence of becoming obliterated, so that I do not think our drainage would have continued. Other than this there was no communication with the pleura. The pleura, where not adhered, presented a smooth normal appearance—precluding the possibility of an old empyemic cavity. There were two very large and soft bronchial glands.

To me the principal points of interest

in the case are these: First, etiology; second, the diagnosis; third, the deceptiveness of the physical signs; fourth, the wisdom or otherwise of operation in such a case. He had had diagnoses made of bronchitis, tuberculosis, unresolved pneumonia, and pleurisy with the effusion, to say nothing of malaria, *et cetera*. No doubt some of these were correct. As we look back over the history he must have had a chronic bronchitis for several years, and superimposed upon this it seems probable that there was a broncho-pneumonia, which probably was the determining factor in establishing the bronchiectasis; the soil having been prepared by his chronic bronchitis.

As to the pleuretic effusion, I think the autopsy rather argues against that theory; and at least of an empyemia. As to tuberculosis, I do not believe that that diagnosis could have been justifiably made with his history and the absence of tubercle bacilli and elastic tissue from the sputum, as well as the character of the expectorated material.

All admit the frequent impossibility of diagnosing between a limited empyemia which has broken into a bronchus and a bronchiectatic cavity which has ruptured into the pleural cavity.

In regard to the etiological factors, one finds oneself in an inextricable maze when the attempt is made to master the literature on the subject, but this much seems fairly certain, that there must be two causative factors—first, a weakening or deterioration of the bronchial wall, be this congenital or acquired; second, an exciting cause, such as stenosis with increased pressure.

Now the first condition is easily supplied by a chronic bronchitis, and especially if there be a peri-bronchitis. There may, furthermore, be a congenital deficiency in the strength of the walls which in some cases may be to a certain extent

hereditary, as there seems to be a certain amount of family tendency.

The second condition is easily accounted for when there is a growth of some kind partially obstructing a bronchus, but in bronchitis it is not quite so easily explained.

Hoffmann, writing in Nothnagel's Encyclopedia, takes the position that ordinary tenacious mucus is amply sufficient to plug a bronchus in a manner; that with the strong inspiratory pull the air is forced by it, but the expiratory forces are not sufficient to force the air past it in its outward course.

Some think that it is the inspiratory pull working against the plug of mucus which dilates the tube on the proximal side of the plug instead of the peripheral side, as advocated by Hoffman. Again, there may be interstitial thickening which would prevent the expansion of that part of the lung, and the inspiratory force being continued would compel *some* of the portions to give way, which might either be a weakened bronchial tube or weakened alveolar walls, resulting in a bronchiectasis or an emphysema, as the case may be. To the objections that the air pressure behind a plug of mucus is insufficient to cause such dilatation Hoffmann replies that "permanent excess of pressure is a power which, as we see in aneurism, not even bone itself can withstand."

All of these conditions might well be furnished by a chronic bronchitis to weaken the walls and the plugging of the bronchial tubes caused by a broncho-pneumonia. I do not think that the narrowing of the lumen mentioned was sufficient to have caused it. The part played by pleuretic adhesion or even compression by pleuretic exudate is still uncertain.

Lichtheim was able to produce bronchiectasis experimentally by partially constricting a bronchus, but when the con-

striction was complete atelectasis ensued instead.

Now as to the classification, the literature is even more unsatisfactory, and but for Hoffmann's help I should have been utterly unable to place this in any of the accepted classes; for, as you know, the most common division is into cylindrical or non-inflammatory and saccular or inflammatory, the terms often being used interchangeable; but here is a case which is typically cylindrical but decidedly inflammatory.

But he tells us no such division can be made; that the cylindrical may be, and not uncommonly is, definitely inflammatory, as in this case.

As to the delusiveness of the physical signs, it is pretty generally recognized that the size of a cavity or even the presence of one, is a very uncertain thing; but in this instance there was practically unanimity in the opinion that there was at *least* one large cavity, but, to my extreme chagrin, the largest, as stated, was about the size of the patient's thumb.

I suppose the rigidity of the walls of the cavities added an element to their deceptive sounds.

As to the advisability of operation, I think all will agree that, could the size and number of the cavities have been determined, the futility of the attempt to drain them would have been evident.

Although a number of cases have been successfully drained, it has been where the cavities were few and large and peripherally located. The mortality, however, of the operation is said to be about 50 per cent.

Discussion.

Dr. Moleen: I wish to speak of a case which I think was entirely due to whooping cough in early childhood. The physical signs were a great deal as stated by Dr. Gilbert, a large and copious expectoration reaching as much as a pint and a half in 24 hours, making it a case of some interest in reference to the remote etiological probability. Another thing in this

case is the remarkable improvement and the diminishing of the expectoration under the iodine treatment. The sputum in the case was negative on microscopic examination and was, as I said before, quite large in amount. In a month it was diminished, and within eight or 10 weeks reduced to an ounce in 24 hours under the administration of iodine; and during pregnancy some time later, as well as in the puerperium, she had no expectoration, and is doing well at the present time. I was a little doubtful of the diagnosis of bronchiectasis when I had Dr. Hall examine this case. I report it for the reason of the peculiar etiological factor in it, so far back as whooping-cough, and also because of the improvement under iodine.

Dr. Grant: I will allude briefly in this connection to a case treated by me this year. A gentleman living in New York City, aged about 40, and weighing about 185 pounds, had an attack of pneumonia in January, 1904, and relapsed in following April. Went South and remained until fall. Returned to New York well, with normal weight restored. Had another attack of bronco-pneumonia in January, 1905, with some expectoration of blood. Was treated and aspirated in left cavity by Drs. Taylor and Janeway, with negative result, and who were in doubt as to tuberculosis, though repeated examinations of sputa showed no bacilli. He was in March last sent to Colorado for his health, and consulted me. Several examinations revealed, at intervals, streptococci and diplococci, but no tubercle bacilli. Apex of left lung solid, no air entering the upper lobe. Clinical history and absence of tubercle bacilli convinced me that the condition was not tubercular. I believed him suffering from an unusual circumscribed empyema, or abscess of lung, or saccular bronchiectasis. The expectoration was, at times, very profuse and extremely putrid, and on two or three occasions considerable semi-clotted blood with pus and mucus. On consultation with Drs. Freeman and Whitney it was deemed advisable to explore the lung by operation. In May last I operated at St. Luke's by removing a section of $2\frac{1}{2}$ inches of second rib in front. The pleura was adherent and greatly thickened, and the lung retracted, making a saucer-shaped depression in apex. With the fingers it was not difficult to explore the lung, and the middle finger entered its full depth into the lung substance, which was friable and of a fibroid character, with no air whatever entering. No distinct cavity was entered. The wound was packed gently with

iodoform gauze, which was replaced on second day with rubber drainage tube. The discharge of pus and bloody serum was quite profuse and continued so for two or three weeks. The temperature at the time of operation was 103 Fr. It fell in 24 hours to 102, and in one week was normal. It remained so until early in July, when suddenly his temperature rose to 103 and remained so one week, when with rather sudden and profuse expectoration it went to normal just as suddenly and remained so permanently. It was noticeable that soon after the operation air commenced to enter the upper lobe. This continued to improve, and when he left Denver, about August 10th, this was very marked and air was entering the lung very freely, and cough and expectoration diminishing rapidly, with satisfactory improvement in strength. He went South, and I am able to report that he is well, with no cough, and his normal weight regained. I believe this was a case of saccular bronchiectasis, involving the left lung, and due to unresolved attacks of pneumonia. The differential diagnosis in such a case is interesting and important, and sometimes difficult. Surgery is not regarded as offering a promising field in bronchiectasis. A few have been done with two or three satisfactory results. In the present instance it seems to have been beneficial.

Dr. Hall: The case of Dr. Grant's is a most interesting and instructive one. I want to say a word as to the diagnosis in the case of Dr. Gilbert's, which I saw with him. From the percussion note and the voice sounds I had no doubt of the presence of a cavity, and this was verified by the finding of pus and elastic tissue with the needle. Yet we find that these came from the dilated bronchus. The elastic tissue of course proves that there was ulcerative change in the lung as well as dilatation of the bronchial tubes. In other words, a cavity was present, but not of the kind we expected to find. Bearing in mind the bad prognosis in such cases, I should, in similar conditions, recommend exploration, for we may sometimes save a life by draining a single large cavity, and the outlook is most serious without such help.

Discussion Closed.

Dr. Gilbert: In regard to the remarks of Dr. Grant; his case is very interesting. It must have been more limited in extent than this case of mine was. Bronchiectasis involving the upper lobes is rather unusual except a complication of tuberculosis, and then not

quite so typical. Any one, I think, to examine the walls of these cavities, will find that this case could not possibly, even ever so thoroughly drained, have terminated so promptly and favorably, because the walls are so rigid and hypertrophied, and, as you see, very much thickened. As to being unilateral; it is not uncommon to have a case of bronchiectasis unilateral. In regard to the operation: I was going to say that if any one could have foreseen the number and size of these cavities, the futility of operation would have been evident. But, as Dr. Hall says, I think it is only by continuing to operate in these doubtful cases, and especially in a case of that kind where the symptoms were so severe and the case was evidently progressing downward very rapidly, there would not have been any doubt that he would have died in a very short while any way.

THE COLORADO MEDICAL LAW IN OPERATION.

By W. F. CHURCH, M. D.

The November number of COLORADO MEDICINE contains an article on "Medical Laws and the Influences that Mold Them," by the secretary-treasurer of the Colorado Board. What is therein contained, together with other writings of the secretary and accurate information gleaned from other sources, form the basis for this consideration of the new medical law in operation.

There are few self-evident truths relating to medical legislation, and the different phases of this subject may not appear in the same light when viewed by different observers. The author of the article has presented his view of the questions discussed in a manner apparently convincing to himself, if not to all others. I do not claim to wield a trenchant pen or one pointed with Damascus steel, yet will endeavor to present briefly somewhat different views, expecting them to be received "toward the development of the broad spirit of free-masonry, liberality, and consideration of the opinion of others." (See page 237.)

Every physician, whether he gives the subject little or much thought, is interested in medical legislation. It concerns not only the welfare of the people but himself as a member of a profession whose highest mission is to benefit the race. For these reasons it is hoped that every reader of the official journal of the State society, and likewise every physician in the state, will give this subject the attention it merits.

WRITTEN EXAMINATIONS.

The secretary-treasurer expresses a strong disapproval of written examinations, although used by examining boards in a majority of the states. The chief objections are the "lack of justice and equity to all classes of applicants," and that the discretionary power of the board is limited by a statutory requirement. In answer to the last objection it may be stated that the position of a member of the board is an appointive one and no physician need accept unless he is willing to carry out the provisions of the act. No method of examination has yet been devised but what might be considered unfair in some instances. Written examination is the form used by the Chinese in their civil service tests; it is the chief method in colleges and universities; for licensing teachers and the members of other occupations and professions than our own. In this state, admittance to the bar is gained only by a written examination, together with a practical oral one. The oral method was the one most in vogue a half century ago. Has there been progress or retrogression? There is another factor to consider besides the fair treatment of the applicant. The people of the state deserve and are entitled to as much consideration as the license seeker. Are they to be benefited or their welfare promoted by a rapidly increasing supply of physicians induced to come to the state by the widely circulated report of fairness

and equity to all and an easy method of obtaining a license?

THE COLORADO METHOD.

The secretary states that the board allows undergraduates to make application for a license. It is astonishing that this relic of some of the early medical laws should find favor with a board endowed with the power to adopt high educational requirements. For what special reason should the door to practice be opened to the man who has failed in his final college examinations? The arguments in favor of this backward movement in educational requirements under a recent law are not worthy of consideration. A very large majority of applicants are granted licenses on their credentials. If in rare instances the credentials fail "to convince the board of an applicant's qualification, he is examined, first orally and clinically, and the following day voted upon by the board in session. Should an applicant fail to receive a majority of votes he then is required to take a written examination." The "Colorado method" is certainly different from any other in the land. It must be encouraging to the man who has failed to be invited to another trial. He has good reasons to expect that this will be easier than the previous test, otherwise of what use would it be? Later, if victorious, he may feel highly flattered that the board considered him needed as a practitioner for the benefit of the public good.

It is strange that after the secretary of the board has condemned the written examination it should be chosen as the final test. It is the trial from which there is no appeal. This being the case, why should it be more unfair or less accurate than other methods? Why are not the three methods placed on an equal basis and the grading averaged if it would be an improvement on the methods of other boards?

RESULTS OF THE METHOD.

The merits of a law, however good it may be deemed at the time of its enactment, can best be judged after a fair period of operation. Six months have elapsed since the law was placed on the statute books. During that time more men have been admitted to practice than in Minnesota during the entire year just past, and yet that state has a population three times as great as Colorado. In the last quarter ending in October, Colorado granted a license to as many applicants as did Connecticut during the past year, notwithstanding that the little state bordering on Long Island sound has a population greater by four hundred thousand than the Rocky Mountain state. The ratio of physicians to population in Minnesota is 1 to 900; in Connecticut, 1 to 590; in Colorado, 1 to 375. In Connecticut 27 per cent. of the applicants were rejected; in Minnesota nearly 24 per cent.; in Colorado 3 per cent. The increase to licensed practitioners in the state during the six months just past has been nearly, if not quite, 9 per cent. Should the rate of increase for the remainder of the year ending May 1, 1906, be only two-thirds as great, it may be stated with fairness that after making due allowance for deaths, removals and other methods of elimination, the increase in the number of physicians will be four to five times greater than the increase in population. Were the figures reduced one-half there would yet remain sufficient evidence of the congested condition complicating the practice of medicine in the state.

One of the evils that medical legislation seeks to abolish is increased as the profession becomes overcrowded. Competition must be keener as numbers increase and incomes must necessarily grow less. To the man who is not able to hold his own and supply his pecuniary needs or who is possessed with a vaulting ambition

to succeed there come temptations requiring strong moral fibre to resist. From experience it is known that some will yield under any condition of prosperity, while others only after inability to get work in a legitimate way. Not only are the niceties of medical ethics neglected, but the plainest rights of others infringed upon without regard to courtesy or ordinary decency. The public becomes the prey of these men still respectably cloaked in their professional garb. They commit offenses that disgrace themselves and the profession, yet keep safe from any legal penalty. They may be ethical in their conversation with other physicians or in the consultations to which they may manage to be called, yet later do not hesitate to get control of another's patients by disreputable methods. The health and welfare of the people are rather endangered and injured than protected and improved by the operations of a law that permits of such final results. The highest purpose and excuse for its enactment are defeated by its inadequate method of operation. The menace to the prosperity of the honest members of the profession is not from osteopaths, whose star of popularity is undoubtedly on the wane, or from science healers, whose patients are undesirable, but from the overcrowding and quackery within its own ranks.

RECIPROCITY.

Since the present laws in the several states are not uniform, without doubt some hardship is inflicted upon practitioners who for various reasons desire to change locations and do not wish to stop at the borders of their own state. This is generally admitted by fair-minded men who have given some attention to medical legislation. The man who immediately after graduation passes a state examination and is admitted to practice may think he is capable of practicing in any state; in fact, he might pass the boards of

all the states should be have money and time to devote to such an accomplishment. If the examinations given in the different states were all equally efficient it would be entirely unnecessary after passing one examination to go from state to state taking equal tests. An endorsement of the first license would be practically equivalent to making a test of the same grade already attained. Unfortunately, some examining boards consider their examinations more thorough than many others and are not willing to endorse the license granted under an inferior standard. The legislative committee of the American Medical Association have formulated a standard for medical education and are working for the adoption of reciprocity by all state boards. If all colleges adopt a high standard the problem may be solved for future graduates. A different solution may be needed to discover how men now in practice can move from one state to another without an examination and the profession within the newly-adopted state be at the same time treated with perfect fairness.

Several states have reciprocal relations. Minnesota has a clause in her medical law permitting reciprocity, and the secretary of the state board recently stated that he believed in it. Several of the Mississippi Valley states endorse one another's license. The members of the California board "do not believe in reciprocity," and it is not difficult to understand the reason. Probably ten men come from other states to practice in California where one goes forth from within her boundaries for the same purpose. The California board sees that reciprocity would be almost a one-sided affair and is not yet unselfish enough to act for the benefit of the public good throughout the country, instead of within the state. The New Jersey board not long ago believed in reciprocity in a certain way; that is, when New Jersey got the best of the bargain, or more than likely

an equal trade. That board reciprocates with Illinois, for the demand for endorsement in either state would undoubtedly be light, but would not reciprocate fully with New York from fear of a deluge of men from this great center of population. This great state has a high standard of requirement and undoubtedly as able a body of physicians as New Jersey. In June, 1904, the secretary of the New Jersey board advanced the plea that boards having a low standard should endorse a license from a state having a high standard though the latter would not reciprocate in endorsement. This doctrine is a reversal of the Golden Rule, but it seems to have spread far enough to have infected the secretary-treasurer of the Colorado board. The physician in New Jersey afflicted with weak lungs can come to Colorado and have his license endorsed or recognized as a sufficient guarantee of the necessary medical education, while the doctor in Colorado with a weak heart can go to New Jersey and take an examination or spend the rest of his days waiting for the board to endorse a license representing inferior requirements. Such a stand will not promote reciprocity. If the Colorado board should decide not to endorse the license of any board that would not accept a Colorado license it need not fear that the warm support of the profession at their position will be lacking. It may seem unfair to the man presenting a high grade license to be required to take an examination, but it would create no more hardship than a Colorado physician would suffer elsewhere by having his license rejected. What boards will now endorse a Colorado license?

THE REMEDY.

As it has been shown that overcrowding of the profession is a condition that menaces the public health, and as "the sole duty of the board," according to the secretary, "is to protect the public health,"

the remedy seems to lie in a reduction of the number of licenses issued. It is not advocated that an applicant who has met the educational requirements or passed an examination such as the board elects to give should be refused a license. All applicants should certainly receive as equal and fair treatment as it is possible for the board to give. The medical law recently enacted is, of course, their guide.

Probably nine out of ten medical men in the state are in favor of having a clause in the medical law that every applicant for license to practice medicine must undergo an examination. They are in favor of such a clause because they desire a law that shall be equal in its protective features to those of other states. They do not care to have their state called "the dumping ground for the refuse of other states." The present act "was passed substantially as introduced." No fight was made over a positive examination clause, but the ammunition was expended chiefly against the osteopaths and healers, who were, unfortunately, victorious, as usual. Anyone not in sympathy with a written examination would not, of course, be anxious for the insertion of such a clause in the law, so it seems necessary to look to others to obtain what is of chief importance.

There is, however, one clause in the law as newly amended which has a wider application than was perhaps intended by its author. Section 3 contains this statement: "They (the board) shall from time to time, adopt such rules and regulations as they may deem necessary for the performance of their duties, and a *schedule of minimum educational requirements*, etc. When an applicant for a license offers to the board satisfactory proof that he has complied with such educational requirements as are specified in said schedule, the board shall accept such proof as sufficient evidence of the educational

qualifications of the applicant to entitle him to a license without examination." It is clear the law provides for the examination of all applicants who do not comply with the schedule requirements. It is clear also that great authority is delegated to the board in the adoption from time to time of a minimum of educational requirements. Its schedule might require that an applicant must have attended five full years of instruction in a medical college or served as a hospital interne for two years, or both; otherwise he must take the examination. There is practically no reasonable limit to the requirements the board may exact, according to legal authorities. It is therefore plain that the board has the power by their schedule to require practically all applicants to take an examination, and further power is granted in Section 7 that the examination be a written one "if deemed the most practicable and expeditious to test the applicant's qualifications."

The present schedule admits nearly all graduates in the United States to practice without an examination. Graduates from a very few colleges that were slow in requiring three years of study instead of two, or four instead of three, must take the second and possibly the third test by the "Colorado method."

As only a slight addition in weight is necessary to cause balances to swing up and down, so a small matter is sufficient to make a decision for the physician seeking a location. When it is known that all states save Colorado require a written examination that state becomes the *locus minoris resistentiae*. Let it once be known throughout the land that Colorado has a very high standard of educational requirements and that practically all applicants must undergo an examination, the number that now come knocking at the door of the examining board seeking admission will be much reduced. This con-

clusion can be drawn without hesitancy from the experience in other states.

The members of the examining board are representatives of the medical profession in the state. As the public health is promoted and protected through the efforts of medical men, it should be recognized that members of the board cannot wander far from their duty to the people if they carry out the wishes of a great majority of their real constituents. Will they not advance their schedule of minimum educational requirements?

Greeley, Colo.

CORRESPONDENCE

TO THE MEDICAL PROFESSION OF COLORADO.

GENTLEMEN—It is with regret that we feel it has become necessary to reply to certain misstatements that have been made derogatory to the construction and administration of the Colorado Registration Act by the State Board of Medical Examiners. However, it is not difficult to refute such misleading statements, inasmuch as they have been made, we believe, with honest intention, based upon misinformation of the facts concerned. We refer to the published transactions, and the action in connection therewith, of the Weld County Society in framing and passing through their own body, and attempting to pass through the Colorado State Medical and its constituent societies, the following resolution:

"Weld County Medical Society in regular session assembled:

"Resolved, That, whereas Colorado is the only important state not specifically demanding an examination for a state license to practice medicine; and

"Whereas, There at present exists an acute if not chronic congestion of the physician body; and

"Whereas, The law regulating the practice of medicine in Colorado grants the regularly appointed board of examiners the right to examine all applicants for a state license:

"Therefore, This society does earnestly petition and request that the board of examiners shall exercise their full power and prerogative of requiring a written examination of each and every candidate for a state license who shall apply therefor. By so doing the society believes that the entire medical profession will be benefited."

That you may be able to judge of the justice or injustice of the construction placed upon, and conclusion drawn from the board's action and reply, the latter is here published in full:

"To the Weld County Medical Society,
Dr. Charles B. Dyde, Secretary:

"GENTLEMEN—The State Board of Medical Examiners acknowledges the receipt of Secretary Dyde's communication, together with the enclosed resolution of the Weld County Medical Society upon the subject of the registration of physicians in Colorado.

"The board regrets that the Weld County Medical Society passed this resolution, and begs leave to express the hope that the society will see the advisability of refraining from a further expression of views, or further action, along this line. The society's resolution shows that the members thereof have not had the opportunity of becoming acquainted with the procedure of the board under the new registration law, approved April 20, 1905, and further, that they do not fully understand the function which the board must perform in its capacity as an instrument of the state government.

"In the first place, this board is compelled by the law, and still further by simple justice irrespective of the law, to

admit to the practice of medicine all persons found upon examination by the board to be qualified to perform the duties of the profession, however 'acute' and 'chronic' may be the 'congestion of the physician body' as a consequence. Our duty is to license all persons qualified,—not to restrict the number of persons entering the profession; our sole duty is to protect the public health, by seeing to it that persons admitted to practice are qualified to execute their duties as doctors and physicians. The administration of the functions of our office upon any other theory would be not only unjust but clearly violative of the Constitution.

"In the second place, the board now pursues a method of examination to ascertain the qualification of applicants for license, which, everything considered, is, in our opinion, as nearly perfect to reach the end in view as has ever been devised. Our method in this respect is in truth a most exhaustive examination, and is calculated to show an applicant's qualification, as we think, beyond doubt. This method has been instituted by us only after exhaustive research and study, with the object in view of doing complete justice to the applicant and to the people. Of course, it would not suit persons who have in view the restriction of the profession numerically, for financial, or equally bad, reasons. But we do not hold it to be our province to engage in such an unlawful administration of our duties, and, candidly, that is no part of our object.

"In conclusion, this board cordially invites the Weld County Medical Society to send a committee of their number to be present at the board's next meeting, on Tuesday, January 2, 1906, to investigate the board's manner of procedure in ascertaining the qualifications of applicants for license.

Respectfully,

"THE STATE BOARD OF MEDICAL
EXAMINERS,

"By DAVID STRICKLER, President.

"By order of the board in session October 4, 1905.

"Attest:

"S. D. VAN METER, Secy-Treas."

To infer from this communication that we, as a State Board of Medical Examiners, assumed the autocratic position of denying any man, or body of men, the right to question or criticize our actions, or make suggestions for the betterment of medical licensure, or that we in any way cast reflection upon the quality of the gray matter of the Greeley profession, is too ridiculous to consider. Certainly nothing of this kind was intended. What we did request, was that they cease to discuss or advocate the board's adopting a universal "written examination of each and every applicant" to relieve the "acute if not chronic congestion of the physician body." We hope the advocates of so short-sighted a policy may yet be made to see the wisdom of our request, before they have unwittingly furnished the well organized opposition to decent medical legislation, tangible proof that certain members of the profession, at least, seek the enactment of medical laws for their own protection against competition, instead of the protection of the public health. They have frankly admitted that it is their object and desire to cut down the number of older experienced practitioners coming to this state—physicians and surgeons they know to be qualified, but who they are satisfied would not come to Colorado, and perhaps could not pass a technical examination, provided such was demanded by our board of "each and every applicant," irrespective of age or years in practice. That we had good and sufficient reasons for making such a request we do not think necessary to argue. The one assurance above all others that was made to the last Senate and House by those instrumental in the passage of the existing law was that its construction and administra-

tion should be free from any principle of trade unionism; and for a single member of the medical profession, much less a representative county society, as a society, to strenuously advocate that the "acute if not chronic congestion of the physician body" should be relieved by the state board's disregard of their plain duty to license those applicants whom they believed to be qualified, irrespective of number or school, is sorely regretted. If we have, in the minds of the gentlemen, committed so grave an error in requesting them to cease doing that which to those who have labored hard and long in the thankless job of securing better medical laws is known to be detrimental to the cause, it cannot be helped. We, at least, have no fear to rest our case with the profession at large and the people of Colorado. The members of the board are a unit in the desire to raise the standard of medical education in this state as rapidly and as high as possible, and such remarks as "we were at least ten to fifteen years behind the times in legislative matters," "we have reached the point which the state of Illinois has abandoned ten years ago," and "that the present law was the ideal of an idealist, and in its execution nowise suited to the requirements of the state," are altogether erroneous, and show at least a total disregard of desire to investigate the subject matter necessary for an intelligent and accurate statement of the situation.

The statement that "Colorado is the only important state not specifically demanding an examination," etc., is wholly wrong and misleading in the extreme. A very large percentage of the licenses granted in the Middle and Northern states during 1905 were on credentials, and not on a chain of credentials as Colorado requires either, but simply on the possession of a state license. Even autocratic old New York has seen the utter

injustice of demanding a written examination of all applicants, and since this discussion began has agreed to accept a New Jersey license as sufficient evidence of qualification upon which to grant a license without examination. The gentlemen from Weld should stick to facts. They should not indulge in statements that history will not sustain.

Colorado is not "being made a professional dumping ground." The decrease in licensure since the new law went into effect has been 50 per cent. as compared with last year. Take the trouble to send a committee to investigate who will investigate, and you will be convinced that we are administering the law quite differently from what you think. Our office and books are open for public inspection every day from 9 until 4, and we are pleased at all times to receive visitors interested in the subject of medical licensure.

You will find that our licentiates average in qualifications higher than those in states requiring universal written examination, because that method of necessity practically excludes all applicants, except the recent graduate, and if there ever was an unknown, uncertain entity, it is the recent graduate. He may be able to pass a perfect technical, written examination, yet be an absolute failure when put to the test of practice. It is quite different when it comes to judge the qualifications of a man who has been in the harness. It does not take long, nor is it difficult, to determine where he stands. It cannot, however, be accomplished by asking him the "chemistry of the diazo reaction" or "the origin of the seventh cranial nerve." What is the purpose of an examination (oral, clinical or written) anyhow? It can be but for one purpose, that of ascertaining an adequate knowledge of the applicant's educational qualifications, upon which to decide the question of whether or not he has attained that standard deemed

proper to entitle him to licensure. Were it a fact that a written examination is the ideal method of ascertaining the knowledge of applicant's qualifications it would be quite different, but when it is not, and is advocated for ulterior, selfish motives in strict disobedience of the provisions of the law, there is nothing to sustain the policy.

The language of the statute (see Section 7) relative to examinations is perfectly clear and free from ambiguity. To ignore the following clause: "Upon investigation of an applicant's credentials the board *shall*, when convinced that an applicant is qualified to practice medicine, grant him a license thereon without further examination,"—would require an extreme degree of amblyopia and a pliability of conscience that should render the possessor an improper individual to administer the law. How can any sane person suppose for a moment that the board can disregard this provision of law and arbitrarily "adopt a schedule of educational requirements so high that no one could come up to it" and thereby speciously justify "a written examination for each and every candidate for state license who shall apply therefor?" Yet such is the outspoken request of the gentlemen from Weld, and that, too, avowedly for the purpose of keeping away from the state experienced, qualified men.

Because other states are prostituting their medical law, and making a close corporation of the practice of medicine within their borders, is no reason why we should follow in their footsteps. The profession of Colorado is not, and we trust never shall be, so void of the principles of fairness and equity as to want to abolish competition by decreasing the "physician body" numerically through the adoption of an arbitrary or unfair restriction upon competent, experienced, qualified practitioners who wish to locate in our state.

It is to be hoped that the discussion of this matter will in the end serve to dispel some of the general apathy of the profession upon matters legislative and bring support to the State Board of Medical Examiners and others who have for years fought for the enactment of better medical legislation. They certainly need encouragement, instead of discouragement.

Respectfully,

S. D. VAN METER,

Secretary-Treasurer Colorado State Board of Medical Examiners.

Canon City, Colo., October 17, 1905.

Editor Colorado Medicine:

Lately, in refusing to invest in a "jag cure" offered for sale by a young man hailing, I think, from Knoxville, Tenn., I said some things which evidently disagreed with said young man's stomach, and, as he had a good supply of gall on tap, he retorted to the effect that ethics was played out and only observed by those who were candidates for office in some medical organization. In proof of his assertion he showed me a list of names of physicians to whom he had sold his "cure," and, behold, in the list were the names of a few prominent physicians of Denver, Pueblo, Colorado Springs and Cripple Creek, who are also members of the Colorado State Medical Society. Now the question is, was this list a fake, or have we men in the State Society who will so far forget themselves as to buy a quack "jag cure?" Can any reader of Colorado Medicine enlighten me? Truly yours,

T. B. MOORE, M. D.

As It Looks to a "Country Doctor."

Editor Colorado Medicine:

A feature of the last meeting of our State Society, to one who had been for several years without the opportunity of attending such gatherings, was the absence of papers treating of the common diseases.

Much was said about interesting the profession at large, the "outside men" of the state. The average doctor in our small towns is a practical fellow. His time is almost all spent

in the treatment of a few ordinary diseases. If he attends his State Society meeting he hopes to hear something that will be of benefit to him in his daily work. He enjoys hearing the report of a rare case, or seeing a difficult operation demonstrated. It excites great admiration for the man who can tell us all about such things. We may send him a patient on account of it. But it does not give us anything to take home to help us in our work.

Tuberculosis, hay fever, nervous dyspepsia, and heart lesions were about the only subjects considered which were of practical every-day interest to the country doctor. There was nothing to tell us of the late advances in regard to the care of typhoid fever, pneumonia, diphtheria, the medical side of gastro-intestinal diseases, or the other common things which go to make up four-fifths of the family doctor's work. Is it possible that the last word has been spoken on the handling of these diseases? Is there nothing new to learn concerning them? If not, it is of but little practical use for the country doctor to attend our annual meetings.

At the last meeting the complaint was frequently heard that "Denver wants to 'hog' all the honors." This should not be heard in the future. It was thoroughly shown at that meeting that the outside men take all the honors they are entitled to. It may also be safely said that the great majority of our city brethren are well satisfied that it is so arranged and will be more than pleased to see the outside members take an increasing interest in both the work and honors of the society.

CARL JOHNSON.

Montrose.

The Councillors' Bulletin.

The above is the title of a new publication issued by the American Medical Association and is to be issued bi-monthly from September to May. It will be sent to all state and county secretaries and state councillors. Its object is to assist in perfecting the organization of the profession on the theory that "in union there is strength," and in order to be a factor either in society or politics we must present a united front.

The little magazine is so full of good things it is difficult to make any distinction, but in future we expect to make liberal quotations from its pages.

CONSTITUENT SOCIETIES

The Fremont County Medical Society met at the office of Dr. Rambo in Florence, November 6, 1905. Meeting called to order by President Rambo. Following members answered to roll call: From Florence, Drs. Rambo, Edwards, Cummings, Conditt, Adkinson, Moore; from Canon City, Dr. Phelps.

Dr. Edwards presented a fine specimen of mulberry calculi, passed by a man 68 years of age, and reported case.

Dr. Edwards also presented a little boy, 6 years of age, that had fallen from a heavily loaded wagon, which passed over and crushed the upper third of the left thigh. The doctor explained his mode of treatment and advocated straight extension for the case. The little patient did well, but about six weeks after the accident one night he became frightened and jumped against a trunk, breaking the leg over. The case was examined by all members present and proved very interesting.

Dr. F. R. Moore read a paper on the care of the new-born child, which was full of practical and useful hints. This paper was discussed by all physicians present.

Dr. Cummings reported a recent case of a congenital backward dislocation of the left knee.

After a pleasant and interesting meeting the session adjourned to meet in Canon City, first Monday in January, 1906.

Refreshments were served.

MARY E. PHELPS, Secty.

Pueblo County Medical Society.—Regular meeting of Pueblo County Medical Society held November 3, 1905, at Woodcroft Sanitarium.

Dr. Work gave an interesting clinic on paresis. He exhibited patients in all stages of this disease, some showing the classic symptoms, others the rare manifestations of this condition. After the discussion the members were treated to a fine lunch, and expressed their appreciation by a vote of thanks to Dr. and Mrs. Work.

The following resolution was proposed by Dr. Work and adopted by the society:

Resolved, That the secretary be instructed to convey to Dr. R. W. Corwin the congratulations of this society upon his election as president of the Association of American Railway Surgeons, an honor fittingly bestowed.

MADISON KEENEY, Secty.

Pueblo County Medical Society.—Regular meeting of Pueblo County Medical Society held November 17.

Dr. William Sanger read a paper entitled "The Clinical Diagnosis of the Anemias." The doctor's paper was essentially practical, dealing with the necessity of frequent blood examinations and the knowledge to be gained by such examinations by competent men.

Dr. Epler extended an invitation to the society to meet with him at his residence the next regular meeting. Society accepted the invitation and adjourned.

MADISON KEENEY, Secty.

The Boulder County Medical Society held its regular monthly meeting at the court house, in Boulder, Friday, November 10. The members present were Drs. Baird, Rodes, D. Robertson, Ambrook, Reed, Giffin, Spencer, Gilbert, Queal, Campbell, Ferrington, Harlow, Wood and G. H. Cattermole. Among the guests were Drs. Arneill, Burgess, and Keyser.

The names of Drs. Burgess and Skinner were proposed for membership in the society.

The first paper of the evening was one entitled "Pneumonia; Remarks on its Treatment, With a Report of Some Interesting Cases," by Dr. Arneill, of Denver. This paper was very instructive and full of good suggestions, and was thoroughly discussed by the members present, but as the paper will appear in print in the near future it will not be briefed at this time.

It seemed to be the consensus of opinion that pneumonia was no more fatal here than at lower altitudes. Although a number of the physicians had tried the administration of oxygen in pneumonia, no one had seen any marked benefit from its use. Strychnin was resorted to in most cases of pneumonia; alcohol had been used with apparently good results; but it was agreed that the cases might have gotten along just as well without these drugs. It was suggested that adrenalin, by contracting the arterioles, might be of value where there was great vascular relaxation; others believed that digitalis was indicated rather than strychnin, because the former drug acts on the muscles of the heart and blood vessels, while strychnin stimulates the already over-stimulated cardiovascular centers.

The pathology of fatal cases of pneumonia seems to be quite uniform. A limited area of the lung shows complete consolidation; this is the primary focus, while the rest of one or both lungs shows congestion, and in the very

young or the aged there are areas of bronchopneumonia scattered through the lungs; with this condition in the lungs, the heart is found to have stopped in diastole, all of its cavities are filled with blood, and it is usually dilated.

The second paper, entitled "The Report of a Case of Dendritic Keratitis, With an Unusual Etiology," was presented by Dr. F. R. Spencer, of Boulder. This is a rare disease which heretofore has been looked upon as a sequel of malaria, but the writer of this paper was unable to find any malaria in the case studied by him. He did find, however, a diplococcus, which is not the gonococcus, but which he has not been able to identify as yet. Bacteriologists are working on the germ now and Dr. Spencer hopes, in the near future, to give us more information relating to the etiology of this condition. The essayist gave very clear directions for the diagnosis of dendritic keratitis, also the means of determining the stage of the disease. Two interesting features of the case were the slight involvement of the lids, and its cure by the application of 95 per cent alcohol.

Dr. Farrington reported a fatal case of sepsis, of unknown etiology. The onset was sudden; temperature soon ran high, and nervous symptoms were prominent. Kernig's sign was present; but spinal fluid, taken by lumbar puncture, was found to be sterile. Widal's reaction was not present.

Dr. Giffin reported the case of a girl, aged 17 years, who had been sent here from Chicago in June. Examination of the chest then showed slight trouble in one apex, and a mitral murmur. Late in September she began having hemorrhages; one, two or three of these occurred each day for eleven days. From that time she went down rapidly, and died about three weeks after the hemorrhages ceased. The signs in the chest were those of a diffuse bronchitis toward the last.

Dr. Cattermole exhibited the heart of a man of 70 years in which there was a valve-like opening between the auricles; the opening was situated at the anterior border of the foramen ovale. The heart weighed 19½ ounces. The coronary arteries were very hard. The mitral and aortic valves were very much thickened and contracted.

Dr. Gilbert reported a case of phlebitis of both legs, following typhoid fever; also, the case of an alcoholic patient who died of gastric hemorrhage. The liver was contracted, so the hemorrhage may have been from varices of the esophagus, or from ulcer of the stomach.

The society adjourned to meet the first Thursday in December.

GEO. H. CATTERMOLE, Secy.

Weld County Medical Society met in regular session in Dr. Hughes' office Monday evening, November 27, with the President in the chair and a good attendance of members. Secretary being detained, the minutes were dispensed with. After the transaction of routine business, Dr. Graham reported a case of brain injury in a boy fourteen years of age. The young man was thrown from a horse and received the impact on the right side, especially the right side of the head and face. These were marked by considerable abrasion and contusion. Although completely unconscious, no evidence of fracture was discovered. At this time, in addition to vomiting, the clinical picture was marked by a continuous clonic spasm of the muscles of the left side. This continued with lessening severity for eight days, at which time the first signs of returning consciousness appeared. Strange to say this encouragement was not an unmixed blessing, as the right side of the body was now involved in a complete hemiplegia. This continued for a week or more, when motion gradually returned. The leg first, later the face, and finally the arm regained its power. Dr. Graham considered that the initial symptom, constant motion of the left side, was caused by an intra-cerebral hemorrhage close to the right corpus striatum. The later hemiplegia of the right side, he thought, was due to a serious affusion in the neighborhood of the opposite striat body. The impulse to trephine for the removal of either set of symptoms would not have been a wise or beneficial procedure.

Discussion in a hypothetical style was indulged in by most of the members present. Their opinions, however, failed in any way to elucidate the question.

Dr. Call now arose and presented the report of the committee appointed to investigate the "Colorado Method."

Mr. President, Gentlemen of Weld County Medical Society:

In presenting the report of your committee I ask you to be kindly lenient, for our opinions, as you have before been informed, represent a very imperfect knowledge of the subject. Our intentions, however, are good, and our investigations, while not complete, are, we think, fairly satisfactory. It comes to us at this time that the criticism with which our society has

been assailed contains at least a partial truth. Our mental process has assuredly been slow, not because we instituted a campaign for a better execution of our state medical law, but inasmuch as we did not take a more active interest before this time. What shall we say, then, of the other county societies—of the stars of greater or lesser magnitude, which gleam to the south of us? Surrounded and concealed by a thick haze of mental torpor, they drift on, a generation to the rear. We desire, therefore, at this time, to call your attention to a few of our findings and a few of our conclusions. We consider that the theory upon which the present medical law is based, and its manner of execution, might be made serviceable and efficient under different circumstances, i. e., a change in the laws of other states to conform with ours; under present conditions our law is manifestly inadequate. We find that the general impression exists that Colorado is an "easy mark"—one of the very few states where the obtaining of a license is a very simple matter. In comparison with other states, we find that Colorado is, in one respect, in the van. One physician to every 370 population. This can be readily understood by noting the number of physicians who come to Colorado compared with the number going to other states. We admitted during the past five months not less than 133 physicians, turning down 4, or less than 3 per cent. Iowa during the whole of 1904, with a population of 2,300,000, admitted only 226 physicians, turning down 16 per cent of her applicants. West Virginia with a population of 1,000,000, during 1904 admitted 163 physicians, turning down 19 per cent of her applicants. Minnesota, with a population of 1,850,000, during the same period admitted only 124; 24 per cent of her applicants failing. If you think that these states do not accurately represent conditions, such as obtain in Colorado, let us turn to a state whose climate, like ours, has some attraction for invalids and health-seekers; a state whose condition until recently was as desperate as ours. A Daniel came to judgment. They have now a law with which they are perfectly satisfied; reciprocate with none, because, like us, ten will desire to locate there while one desires to leave. I refer to the state of California, which, with a population of 2,000,000, during thirteen months licensed only 234 physicians—136, or 36 per cent, fell by the wayside. A still later report from California for the quarterly examination held last July in-

forms us that of 93 candidates examined 48 passed and 45 failed. Oregon at the same time and for the same period examined 57 candidates, of whom 21 passed and 36 failed. Our position with 133 admitted and 4 failures (during a period of five months) is truly absurd and would be ridiculous if other emotions were not aroused at such a spectacle. Again, the Secretary of the Connecticut board informs us that he receives no specified salary; the secretary of the Minnesota board and his assistants receive in all \$50 per month, while the secretary of the California board and his assistants receive \$135 per month. From returned vouchers examined at the state capitol in Denver we find that our secretary and his assistants draw \$275 per month. What is the result? Simply this, that in order to pay the salaries of our secretary and his assistants, together with the per diem allowance to other members of the board, we must receive and accept at least 160 applicants each year. The end is not yet. Other legitimate expenses have to be met. For this purpose it is absolutely necessary that a still larger number of physicians be received. How incongruous such a position is! The absurdity of it being absolutely necessary to admit such an over-abundant supply in order to meet the ordinary expenses of the board, even a simple-minded physician can readily see. The fact of the matter is that the Colorado board as at present salaried has to admit more physicians annually than were last year admitted in the populous states of West Virginia, Alabama, Minnesota, Iowa, or even California. It would be a pertinent question to ask at this time, For whom was the Colorado medical law framed? Whom does it now benefit? Whose interests does it safeguard and protect? Assuredly not the resident of Colorado who humbly follows in the footsteps of Esculapius, not the William McClures who, although anxious for the welfare and support of their own offspring, strive to play the man. Nor can we truthfully state that the great public whom we serve are benefited or protected thereby, notwithstanding the fact that the board's "sole duty is to protect the public health by seeing to it that persons admitted to practice are qualified to execute their duties." An overcrowded profession lacking the healthy stimulus of a decent and sufficient living are in no position to render the best service to those who require their help. It surely is a rare satire for us to think or believe that the applicants who aspire to practice medicine in

Colorado are so superior in their qualifications and mental attainments that only 3 per cent fail to gain a ready entrance within our portals, while other states report 16, 19, 24, 36, and even as high as 63 per cent of failures. While we have not many specific examples of applicants who, although failing before other boards, readily pass our "exhaustive examination," nevertheless we have no doubt there are many such. One physician who has been admitted under the new law and who resides not far from this county seat was this summer examined and refused a license by the Oregon board. He gains a ready and placid entrance into the licentiate of Colorado. Does, then, our law serve none save the applicant? Are his interests alone safeguarded, his welfare alone protected? Tenderly cared for lest perchance he might be compelled to seek other pastures, his credentials and moral equipment are first considered; failing in this, he receives an oral examination, and if again unfortunate enough to receive a negative vote he is accorded the further privilege of a written examination. Eureka! Eureka! That which was lost, the precious pearl of great price! With confidence the feeble intellect can now bravely assert that our law fully, entirely and comprehensively protects any one of any class, creed, or doctrine who desires to make his home and practice among us.

Moved by Dr. Graham, seconded by Dr. Hughes, that this report be received and adopted. Carried.

Meeting adjourned at 10 p. m. to meet Monday evening, December 18.

CHARLES B. DYDE,
Secretary.

Teller County Medical Society met in regular session November 28th in Victor, at the offices of Drs. Cohen and McClanahan.

Dr. J. B. Gaston presented an interesting and unique paper on "Parasites and Their Natural Enemies."

Dr. McClanahan gave an interesting talk on "Acute Articular Rheumatism," which was profitably discussed by all present.

After routine business had been dispensed with a sumptuous banquet was served by Drs. Cohen and McClanahan. Those present were Drs. Dumwoody, Gaston, Driscoll, McIntyre, McClanahan, Cohen, Thomas, Spicer and Van Der Schow.

THOS. A. MCINTYRE,
Secretary.

BOOK REVIEWS.

The Physician's Visiting List, published by P. Blakiston's Son & Co., just out, is up-to-date and contains the new dose table revised in accordance with the new U. S. Pharmacopoeia (1900).
R. G. M.

Diabetes. By Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfort, A. M. Edited by Boardman Reed, M. D. Translated by Florence Buchanon, D. S. C., and I. Walker Hall. Published by E. B. Treat, New York.

This monogram, which consists of the lectures delivered in the University and Bellevue Hospital Medical College, represents the latest work on the pathological chemistry and treatment of this obscure disease.

It is a summary of over 2,500 cases which have been submitted to careful scientific analysis. The author has brought to this task a degree of clinical insight and acumen which will influence the profession at large.

The chapter on the acetone bodies will be of particular interest at this time to surgeons, as the importance of these bodies has been emphasized in connection with the post-operative effect of chloroform.

Throughout the work presents a refreshing departure from the stereotyped text-books on the subject. The appendix contains food tables for the different stages of the disease, and will be found better classified and more complete than any heretofore published. A table of equivalents for white bread is a feature.

R. G. M.

Neurotic Disorders of Childhood, Including a Study of Auto and Intestinal Intoxication. Chronic Anemia, Fever, Eclampsia, Migraine, Chorea, Hysteria, Asthma, etc. By B. K. Rachford, M. D. Cloth. Pp. 440. Price \$2.75 net. New York. E. B. Treat & Co. 1905.

This interesting work, as set forth in the preface, is divided into two parts. The first includes a series of papers by the author, published in the Archives of Pediatrics under the title, "Some Physiological Factors of the Neuroses of Childhood"—the result of a study of the physiological peculiarities of the immature nervous systems of infants and children and their relation to the neuroses. To the revision of these there have been added chapters on Gastro-Intestinal Toxemia, Auto-Intoxications and Chronic Systemic Bacterial Toxemias.

If one were to criticise at all it would rest with the first chapter, in which, perhaps, too radical a stand is taken upon the function of

the neuron, the role of which has been somewhat shaken, both physiologically and histologically, in the light of recent research which gives prominence to the fibrillary substance or neuropile as a source of nervous activity at the expense of that of the neuron; the continuity of the neuro-fibril through the cell body, and the observation of Bethe of the persistence of reflex activity in the crab after the extirpation of the ganglion cells, being in support of this opinion.

Part two opens with a discussion on "Fever" in children, in which the predisposing and exciting causes and the treatment are handled with a refreshing clearness and brevity. Then follow the chapters on the various neurotic disorders. Those of especial interest to the general practitioner, in the opinion of the reviewer, being: Enuresis, Migraine, Headache, Epilepsy, Chorea and Asthma.

The subject of Enuresis is thoroughly considered, barring the omission of suggestion as an important aid in the treatment.

The introductory statement under the treatment of chorea, "It is to be remembered that an attack of chorea is, as a rule, self-limited," is probably not beyond criticism.

In the closing chapter the subject of Pica or dirt-eating in childhood is given a deserved attention, and it is one of the "small things" so often overlooked as inconsequential.

The clear style of diction, while somewhat forcible and emphatic, is not marred by ambiguity, and is refreshingly readable.

A complete index follows the text. The typography is beyond criticism and the binding neat and serviceable.

The book, throughout, indicates conscientious study and observation on the part of the writer and his ability to tell it, and as such is deserving of a reading by those having an interest in the neuroses incident to child-life and their treatment—one of interest to the student and of service to the general practitioner.
G. A. M.

NEWS ITEMS.

In October Dr. O. M. Gilbert, President of the Boulder County Medical Society, gave a banquet to the members of the county society. It was a very elaborate affair, held in the new Physicians' Building, in Boulder. Drs. Wetherill and Black, of Denver, were present, and thirty members of the local society.

Dr. H. G. Wetherill, President of the Colorado State Medical Society, has removed his office from 1632 Welton street to rooms 505-506 California Building. Telephone 1893.

The New York Academy of Medicine

DUE IN TWO WEEKS UNLESS RENEWED

NOT RENEWABLE AFTER 6 WEEKS

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